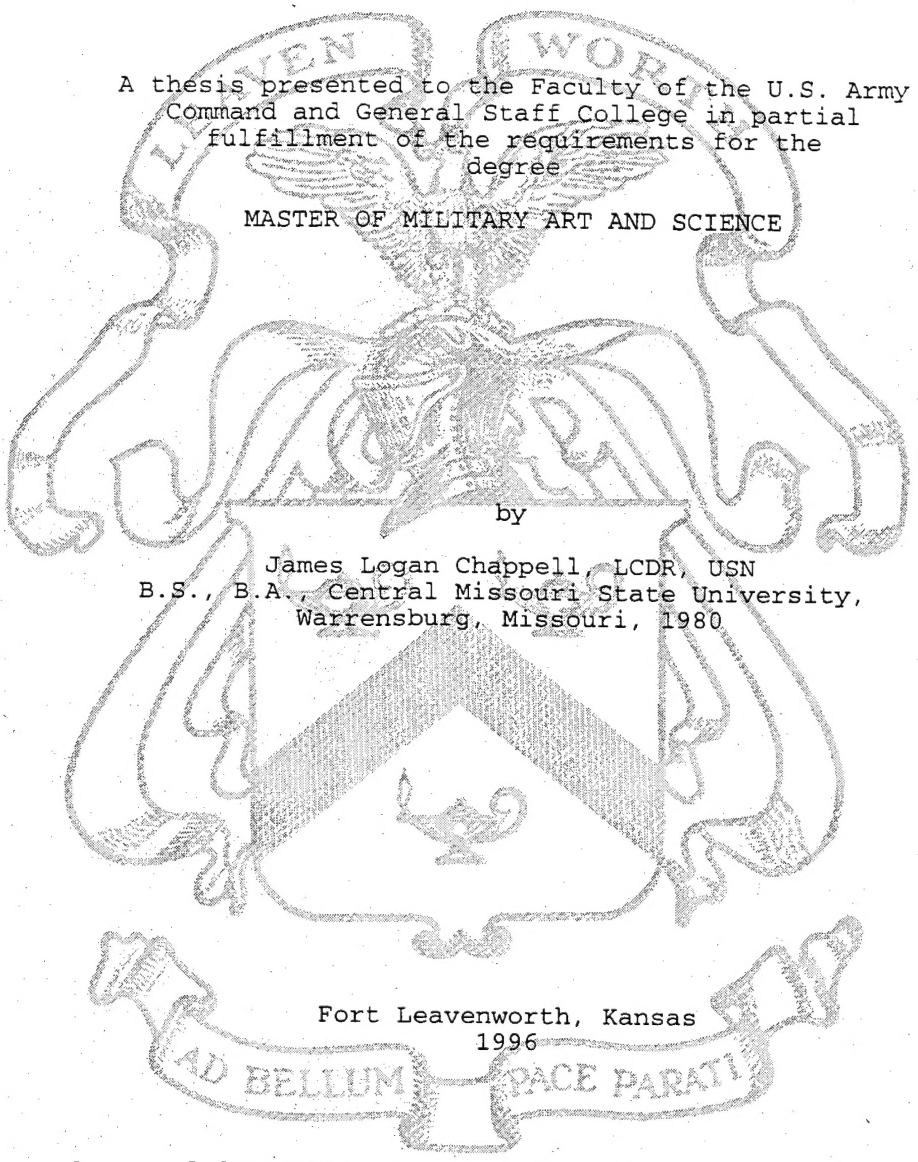
HEROIN THREAT FROM COLOMBIA

A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE

by

James Logan Chappell, LCDR, USN
B.S., B.A., Central Missouri State University, Warrensburg, Missouri, 1980



Fort Leavenworth, Kansas
1996

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	7 June 1996	Master's Thesis, 31 July 95–7 June 96

4. TITLE AND SUBTITLE

Heroin Threat From Colombia

5. FUNDING NUMBERS

6. AUTHOR(S)

LCDR James L. Chappell, US Navy

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release, distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

This study assesses the Colombian opium and heroin production threat to the U.S. since it was first perceived in about 1990. It compares and contrasts the production of heroin to that of cocaine, including the cultivation, processing and distribution systems and the profit differentials of the drugs. This study discusses the demand and supply factors involved ranging from the streets of U.S. cities to the peasant farmers in the producer countries. It also covers U.S. Government efforts and policies to reduce the supply of Colombian heroin to the U.S. and intergovernmental cooperation and difficulties. The findings reveal that since the heroin trafficking methods are so closely tied to those of the cocaine trade, and current interdiction methods and technologies are as effective for heroin as for cocaine, complete reevaluation of the U.S. supply side of drug control strategy is not necessary. The study concludes that reduction of the supply of illicit drugs will be realized from intergovernmental cooperation and the stiffening of international will and laws against illicit drug trafficking, and in the synergistic effect of a multiangle or total suppression approach to drug enforcement efforts, which includes the demand side of tactics.

14. SUBJECT TERMS	15. NUMBER OF PAGES
Heroin, Opium, Colombia	88
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNLIMITED

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THESIS APPROVAL PAGE

Name of Candidate: LCDR James Logan Chappell

Thesis Title: Heroin Threat from Colombia

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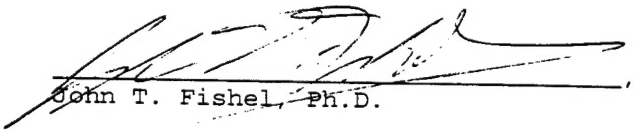
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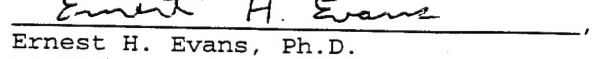
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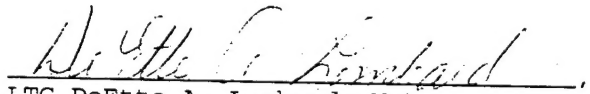
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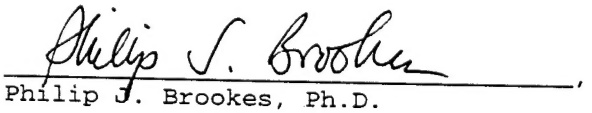
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ABSTRACT

HEROIN THREAT FROM COLOMBIA by LCDR James Logan Chappell, USN, 88 pages.

This study assesses the Colombian opium and heroin production threat to the U.S. since it was first perceived in about 1990. It compares and contrasts the production of heroin to that of cocaine, including the cultivation, processing and distribution systems and the profit differentials of the drugs. This study discusses the demand and supply factors involved ranging from the streets of U.S. cities to the peasant farmers in the producer countries. It also covers U.S. Government efforts and policies to reduce the supply of Colombian heroin to the U.S. and intergovernmental cooperation and difficulties.

The findings reveal that since the heroin trafficking methods are so closely tied to those of the cocaine trade, and current interdiction methods and technologies are as effective for heroin as for cocaine, complete reevaluation of the U.S. supply side of drug control strategy is not necessary.

The study concludes that reduction of the supply of illicit drugs will be realized from intergovernmental cooperation and the stiffening of international will and laws against illicit drug trafficking, and in the synergistic effect of a multiangle or total suppression approach to drug enforcement efforts, which includes the demand side of tactics.

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CHAPTER ONE

INTRODUCTION

Background

The United States drug problem dates back to 1806 when morphine was discovered. During the Civil War morphine was considered to be a wonder drug. Its use became so extensive among Civil War soldiers that addiction to it was termed "army disease."[1] Many doctors prescribed it to middle-class Southern women in the late 1800s for what now would be termed depression. The women in turn developed a dependency to the drug.[2] Also in the 1880s cocaine became available and was used as a remedy for many ills. Cocaine was also considered a cure for opiate addiction. In 1898, heroin was used to treat respiratory illness and morphine addiction. The first antidrug law was passed in 1875 in San Francisco as a municipal ordinance banning smoking opium in "opium dens."[3]

During the 1960s, marijuana came into vogue and began flowing from many South and Central American countries across the borders of the United States. This fledgling industry soon expanded and found a plethora of methods to traffic its product northward. By the 1980s, cocaine had again become popular and more abundant. Cocaine produced far greater profits per unit of volume than did marijuana. The power of the business and the money involved made it a deadly game for all who played. During the 1980s, drug trafficking was modernized with the help of highly technical systems for protection of drug-related assets.[4]

> During August 1994, [in Colombia] the [police] surveillance unit discovered a sophisticated intelligence network used by the drug cartels, which consisted of retired army officers and non-commissioned officers who were experts in communications, intelligence and security.[5]

Corruption of public officeholders and law enforcement officials has been epidemic in several South and Central American countries. Bribery, kidnaping, assassinations, systemic payoffs, and drug dealing are rampant.[7]

> Widespread corruption has been reported in practically every Colombian institution including the Congress, the courts, the Colombian National Police, and the armed forces. The large profits generated by drug trafficking provide the drug cartels with the resources to buy influence in almost all of the important centers of power in Colombia.

Corruption continues to be a severe problem in drug interdiction efforts. For instance, in August 1980, a circuit court judge named Guido Alfredo Miller Gomez and his wife were arrested when about 150 kilos of cocaine were discovered in their residence.[8] In January 1995, the Costa Rican Ambassador to Poland was arrested with 12 kilograms of heroin in his possession.[9]

> In August 1994, 54 Cali policemen were dismissed from the Cali police force after the local (police) surveillance unit found evidence that they were on the Cali cartel's payroll. The officers included 14 captains, 11 lieutenants, and 14 sergeants. Later the entire airport police force, including 13 captains, 11 lieutenants, and 5 sergeants, was fired.[10]

And upon his retirement as head of the Drug Enforcement Administration (DEA) office in Bogota, Mr. Joe Toft described Colombia as a "narco-democracy." During an interview with the local press, he claimed that the influence of drug traffickers had penetrated the Colombian political and judiciary system at every level.[11]

For decades now, illegal drugs have been entering the United States from Europe, Southeast Asia, and South and Central America. Drug trafficking and illegal drug use have had a devastating effect on our nation's economy, criminal justice system, and the physical welfare of our people. Our local, state and federal criminal justice systems are inundated with drug-related and drug-defined crime. Overcrowding of the courts, jails, and prisons; cost of drug counseling, education, pharmacotherapy, psychotherapy, vocational training, and other forms of treatment and aftercare; loss of tax revenue from sales, business,

individual income, and even import taxes; reduction in workforce productivity; and reduction of future output are examples of fiscal strain the crimes in the drug arena impose on our nation. The 1995 statistics place the federal expenditures related to the interdiction of illegal drugs and prevention of illegal drug use at $13.2 billion.[12]

Illegal drugs wreak havoc on the health of those who use them. Some of the direct health consequences of drug abuse are overdoses and acute reactions, exposure to HIV infection, viral hepatitis, meningitis, blood poisoning, and dependence or addiction. The estimated health care costs for diagnosis, treatment, and rehabilitation of illegal drug users were put at $2.2 billion in 1985. Indirect health consequences include injury to users and to innocent bystanders from accidents caused by drug-related impairment, injuries from violence during drug criminal actions, and drug-related abuse.[13]

The drug trade also penalizes the public by causing burglary of homes, businesses, and other possessions for "drug money," thereby imposing fear of drug-related violence. Illegal drug use and drug related crime force insurance companies to raise costs to pay for theft, loss of lives, and medical care. It penalizes the public through costs of drug crime prevention and diminished quality of life through pain and suffering of families, friends, crime victims, and disruptions at school and work. In 1990, Americans spent $41 billion to purchase illegal drugs.[14] Although many may not see it on a day-to-day basis, the illegal drug world weaves its web deeply into the lives of every American.

Much of the illegal drug traffic that enters the U.S. is produced in and smuggled from Central and South America, making these countries a particular problem for the U.S. government. A variety of inventive smuggling methods had been developed over the years including drugs stuffed in a teddy bear; sealed in condoms, balloons, or surgical gloves then swallowed; sewn into various clothing garments; packed in

luggage while smugglers posed as vacationers; carried on the backs of mules and horses or on foot; transported across the border through sophisticated tunnel systems from Mexico into the U.S.; packed in concrete fence posts, in the base of imported fruit containers, and in a box of cheese nips; disguised as legitimate products, such as bottled soda or canned fruit; combined with vinyl to produce a material used in making luggage and sneakers; and on and on.[15]

Because all 300 U.S. seaports, all international airports, and the country's entire southern border are entry points for illegal drug traffic, the U.S. government has tasked a multitude of departments and agencies, including the Department of Defense (DOD), to work together to reduce the flow of smuggled drugs across our borders.[16]

Currently, cocaine is the greatest problem drug due to its abundance on the street; to its high profit per weight (making it relatively easy to smuggle and difficult to interdict); and to its social costs due to lives it takes and the violence it fosters.[17] While most of the coca leaves are grown in Peru, the majority of cocaine processing and transport is in and from Colombia.[18]

Recently, U.S. successes on the cocaine front have created some hope for future containment of that problem. Major drug seizures, including a twelve-ton cocaine seizure on a Panamanian-flagged freighter in the Pacific in August 1995, and the captures of notable Colombian "drug cartel" leaders, such as Pablo Escobar in December 1993[19] and Gilberto Rodriguez Orejuela in June 1995,[20] have boosted confidence in U.S. drug interdiction capabilities. Although evidence indicates no appreciable reduction in cocaine available on the street, the capture of cartel leaders and some large drug seizures may have inflicted some limited and temporary damage to the trafficking system.

Although Mexico had historically been the largest opium and heroin producer in the western hemisphere, by 1991 a dramatic increase in opium cultivation and in heroin drug seizures in South America had

taken place. Now, in 1995, the U.S. Central Intelligence Agency's (CIA) Crime and Counter-Narcotics Center (CNC) estimates that Colombia has become the largest heroin producer by acreage in the Western Hemisphere and produces one-third more opium than Mexico.[21]

In 1971 the worldwide illicit opium production estimate was 990 tons.[22] The 1994 estimate was 3400 tons[23]--a dramatic 350 percent increase in twenty some years. The rapidly expanding opium poppy crop is being processed to morphine and heroin. The reports that the two primary drug cartels and other small organizations have imported "chemists" from the highly experienced heroin production areas of the world, such as China, and Southeast and Southwest Asia, indicate a serious interest in the opium crop.

> The DEA developed a signature for Colombian Heroin in the summer of 1992. "A Southwest Asia signature, which would indicate that probably Pakistanis gave them the recipe, maybe came over and helped them cook some."[24]

This keen interest by the cartels may result in rising exports of heroin to the U.S. DEA agents are already seeing instances of dealers giving free samples on the street in the United States' Northeast; thereby indicating an attempt to "create a market for the product."[25] The chemists seem to have been imported for two reasons: first, to show the existing cartels that heroin is feasible to mass produce in Colombia, and second, to teach local chemists professional heroin-processing techniques to provide a highly pure product and to reach the high conversion efficiencies from the raw materials that are achieved by experienced chemists in traditional source regions, such as Southeast and Southwest Asia.[26] The reports that these cartels' marketing organizations have "released" heroin into the U.S. market and have been promoting the renewed product in a highly pure form indicate that the drug cartels are serious about producing heroin and that it will become a bigger problem for the nation in the next two to four years.

Transportation of the product and its precursor chemicals through Colombia for processing and then to its borders for transhipment is conducted by various methods. Rail, road and highway, water, and air are all used to transport the cargo to some extent. Because the rail system is not highly developed, it is not estimated to be used extensively. Roads and highways are used to some extent; although they are not highly developed in the majority of the country, an extensive network on the western half does facilitate transport. Waterborne craft are used extensively to move the cargo by way of approximately 30,000 miles of navigable waterways. (This figure is variable because seasonal changes in rainfall affect water depths and thus navigability of those systems.)[27] "Water transport is the only practical way to move essential chemicals in the amounts required to produce multiton quantities . . ."[28] Furthermore, rivers are the primary means of transportation in southern and eastern Colombia. Air transport is a highly popular means using light civil aircraft intercountry between Colombia and Peru, and Colombia and Ecuador. Hundreds of airstrips in Colombia are exploited by the traffickers.[29]

The upshot of these various developments is that the opium poppy (papaver somniferum) is being cultivated in increasing quantities in Colombia and other South American countries.[30] The remote mountain slopes of Colombia provide ideal growing conditions for opium and hamper detection and access by counterdrug forces.[31] The transition of many Colombian and other South American drug producers to opium cultivation poses some new questions for U.S. drug interdiction efforts.

Summary

Preliminary research has touched on the background of the cocaine problem dating to the early 1800s with the invention of morphine and its heavy use during and after the Civil war.[32] Then research touched on the modern drug problem from the 1960s starting with marijuana and progressing to cocaine in the 1980s and finally to the

reemergence of heroin in the 1990s.[33] Domestic facets, such as present national drug policy, various domestic markets, consumption trends, narcotic pricing and market building techniques, and increased heroin purity which is making it smokable and snortable and hence more acceptable have been addressed. Overseas shipment (transit) by air, land, and sea and Colombian aspects, such as opium cultivation, heroin processing, drug cartel and guerrilla involvement, and Government of Colombia involvement, police and court action, and eradication efforts, have been discussed.

Indications are that the traffickers are using the same methods for transhipment and marketing and the same distribution channels to the streets as they use for cocaine.[34]

Increased efforts and changes in counterdrug tactics and national drug strategy may be in order to thwart the flow of heroin and other illicit drugs into the United States. Increased crop eradication efforts and strengthened rural development programs may be the most effective interdiction method to decrease the raw material available for processing. Use of biological methods such as fungal pathogens, moths or other bugs, could be another feasible avenue of approach to reduce or eliminate the opium poppy from the Colombian landscape. Political hurdles are probably the biggest problem for the U.S. government in eradication efforts and trafficking; therefore new or updated assistance and cooperative programs and enhanced government-to-government relations may be the most important action to take.

Thesis Topic and Primary Research Question

The subject of this thesis is opium cultivation and heroin production in Colombia. The sharp increase in opium cultivation brings forth the primary research question.

Will the growing Colombian opium trade require the U.S. to reevaluate its drug interdiction efforts and develop new interdiction methods and technologies? Secondary research questions are: Will the

drug production and smuggling methods remain the same for opium as for cocaine? And, will the main drug cartels tolerate new or smaller heroin cartels to operate? Will they cooperate?

Limitations

Research is limited to sources accessible from the local area. No time is built into the program schedule nor is funding available for candidate travel.

Research sources are limited to those written in or translated to English. While recognizing that much important information could be gleaned from sources written in Spanish, program time and resource limitations preclude extensive use.

All available resources through the Combined Arms Research Library and available personal resources extending to the Washington, D.C., area and American embassies abroad are utilized.

Review of Sources

An abundance of information exists to explore the topic of opium production in Colombia. A literature review is the primary type of research conducted. Though much information exists on the subject, some difficulties in information collection surface for these reasons; "(1) Drugs are a highly sensitive and potentially sensational topic, capable of gaining media headlines and causing tensions between governments; (2) the collection of first-hand data can be hazardous; and (3) because the nature of the drug trade, good reliable statistical data is difficult to acquire. An additional point is that the data that does exist is often suspect."[25] Primary source information will be of great value in the form of interviews with relevant foreign and U.S. military officers and Defense Intelligence Agency (DIA) or Drug Enforcement Agency (DEA) analysts or agents.

U.S. Government publications are used to the maximum extent, primarily: U.S. Department of Justice, DEA, Federal Bureau of

Investigation (FBI), and Bureau of Justice Statistics publications, and U.S. Department of State, Bureau for International Narcotics and Law Enforcement Affairs publications. Additional government material, such as Foreign Military Studies Office (FMSO) studies, Foreign Broadcast Information Service (FBIS) translated articles, congressional hearing transcripts, and Rand Corporation research studies were used to support the research. The strength of this type of information lies in its completeness and relative accuracy. Estimates are based on the approximate amounts the area is capable of producing through crop estimates, precursor chemicals[36] available, historical production capabilities, and amounts intercepted before hitting the streets. The federal data bases provide some stability in these estimations.

Media articles and news reports will contribute much of the current information. FBIS translations from Colombia and other pertinent South and Central American media sources will provide a more level playing field, in that they will give the local twist to the controversial issues of U.S. Government aid, and congressional and other official moves that affect the region. These are often sensitive issues to the receiving countries which maintain a high degree of national pride and openly voice local opinions through the media. On the other side of the same issue, the media has recently been chastised by the Government of Colombia officials in some of their reporting of issues involving the Colombian president. In one case the Pastrana family newspaper was threatened with legal action for "Slanderous attitude against the president of the republic and the country."[37] But in nearly the same breath, government officials discuss the attributes of the free press. Therefore, each source and each article must be evaluated for frankness, accuracy, and fairness of reporting. The strength of these sources is in their ability to provide timely information that books and government publications cannot.

Recently published books will contribute a degree of in-depth study in the field. Some history and background knowledge will be derived for use in setting the stage for research.

Personal interviews with knowledgeable foreign officers who are available at this Command and General Staff Officers School will provide, at least, the military aspect regarding regional problems associated with drug interdiction. They may also provide a deeper look at the problems and associated relationships between guerrillas and government; police and military; traffickers, guerrillas, and peasants; the U.S. Government (USG) and the Government of Colombia (GOC); USG agencies and Colombian police; and USG agencies and the Colombian military. The strength of this information is its firsthand experience with the issues. These officers may provide pointed insight and indicate concerns that have not yet been explored. Weaknesses from utilizing these sources could surface from the lack of willingness to provide complete information due to retribution, bias, or other presently unknown reason.

Interviews with U.S. Military officers, DEA, and DIA officers will be held if and when available to discuss issues which are not clear to the researcher and to provide insight to the situation from their perspective.

Data Required to Answer Research Questions

Answering whether or not the drug cartels will tolerate new or smaller heroin cartels to operate and whether these cartels will develop increased collusion, will require information from various sources pertaining to past agreements and arrangements, and treatment of and between the dominant cartels and their suppliers, cohabitants, guerrilla groups, and villagers with whom they operate. Dependent upon human nature, greed, and marketing skills of the players, an accurate estimate of this problem can be made. FMSO studies, Colombian media through written translations of newspaper articles and newscasts, federal law

enforcement officers, and especially Colombian military officers are able to shed enough light on the past behavior patterns of the drug cartels to accurately estimate the propensity for cooperation and collusion among the subject criminals.

Information to answer the questions as to whether or not the opium trade will require the U.S. to develop new interdiction methods and technologies and as to whether or not drug production and smuggling methods will remain the same for opium as for cocaine should be found by investigating a couple of different areas: First, an analysis of present methods and technologies versus any differences in detection and tracking techniques for cocaine and marijuana against that for opiate products; and second, new interdiction possibilities, such as biological methods in concert with current chemical methods of eradication. An in-depth study of the agricultural aspects of cultivating opium in the Colombian climate, namely terrain, soil, temperature, sunlight conditions, rainfall, and growing seasons required versus growing seasons available, will hopefully provide important indications as to why opium has been such a boon over the last five years. Studies on biological methods of eradication, such as moths, beetles, and worms that are drawn to and that are particularly damaging to the opium poppy will be reviewed for possible crop control use.

This information was located through government, sources such as the U.S. Department of State crop estimates; book Colombia: A Country Study; U.S. Department of Agriculture, Office of International Research studies, and other open source reference books. Foreign officer and other knowledgeable individual interviews were required to fill in missing pieces of information on interdiction technologies and methods.

Thesis Structure

Chapter one has set the problem's background by defining the general effects of heroin and illegal drugs upon the U.S. society. It

has listed and evaluated available literature and primary source information.

Chapter two, a threat analysis, discusses opium poppy cultivation techniques, trends, and agricultural factors to establish the feasibility of extensive poppy cultivation in Colombia and the surrounding region. It discusses both currently operational and potential poppy eradication techniques. These include chemical methods, such as glyphosate as is currently used in aerial spraying[38] (the main ingredient in "Roundup"),[39] and biological methods, such as the use of fungal pathogens, moths, beetles, or worms, to damage the crop sufficiently to severely reduce the opium gum yield. It discusses the potential shift from cocaine and marijuana to heroin production by the drug cartels. Also, it discusses cartel participation and collusion with smaller cartels. It discusses the techniques being used to increase the demand for heroin and why demand may increase through supply side factors.

Chapter three discusses smuggling techniques and production and trafficking economies which have influenced and may further influence Colombian cartels to diversify into import/export, or "waypoint" heroin trafficking. Production economies covered include costs of cultivation, refinement to high grade heroin, shipping costs, and the profit ratios. These profits will be compared against those of cocaine and marijuana to demonstrate the motive that drug cartels have to shift to the opium trade. The propensity for import of raw opium and opiate products up through Southeast Asia number 4 grade heroin (SEA #4) is examined with respect to the existing illegal drug-trafficking infrastructure. This allowed the researcher to evaluate the propensity for import/export or "waypoint" heroin trafficking through Colombia to the United States and other global destinations due to its lucrativeness.

Chapter four discusses U.S. interdiction techniques and their contribution to the counterdrug effort. It discusses U.S. interagency

cooperation, responsibilities, and techniques of interdiction, and U.S.-Colombia intergovernmental cooperation, initiatives, and trends.

Chapter five draws conclusions based on the research and discusses roles, responsibilities, and capabilities of the United States, its government, and the Government of Colombia to contain and counter the Colombian heroin trade.

Endnotes

[1]Drugs, Crime and the Justice System, Bureau of Justice Statistics, U.S. Department of Justice, December 1992, 78.

[2]Robert Sabbag, "The Cartels Would Like a Second Chance," Rolling Stone, 5 May 1994, 37.

[3]Drugs, Crime, and the Justice System, 78.

[4]Drugs, Crime, and the Justice System, 38, 44-46.

[5]Colombia: Country Report, 4th quarter 1994, The Economist Intelligence Unit, London, United Kingdom, 4 November 1994, 9.

[6]Drugs, Crime and the Justice System, 56; INCSR 1994, xiv, 104-106; United States Department of Justice, Drug Enforcement Administration, Intelligence Division, The Illicit Drug Situation in Colombia, U.S. Department of Justice, Drug Enforcement Administration, November 1993, 41-43.

[7]Illicit Drug Situation in Colombia, 43.

[8]Richard B. Craig, "Domestic Implications of Illicit Drug Cultivation, Processing and Trafficking in Colombia," Department of Political Science, Kent State University, 9 November 1981, 11; derived from El Tiempo, 15 August 1980.

[9]Patrick Cockburn, "Drug Barons Promote Heroin in the Hunt for Fatter Profits; US War on Narcotics is Failing to Stop New 'Product' Hiting the Streets," The Independent, 9 April 1994, 10.

[10]Colombia: Country Report, 9.

[11]Colombia: Country Report, 8.

[12]National Drug Control Strategy: Executive Summary, The White House, April 1995, 33.

[13]Drugs, Crime, and the Justice System, 132.

[14]Drugs, Crime, and the Justice System, 36.

[15]Drugs, Crime, and the Justice System, 44, 46.

[16]Drugs, Crime, and the Justice System, 44, 46.

[17]INCSR 1994, 81.

[18]INCSR 1994, 81.

[19]Cockburn, 10.

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[33]INCSR 1994, 81.

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[35]Scott B. MacDonald, Dancing on a Volcano: The Latin American Drug Trade, (New York: Praeger Pub., 1988), Preface.

[36]Precursor chemicals, in this research project, as in common convention, is used indicating chemicals required in the processing of raw material to a refined drug product such as heroin or cocaine. DEA documents breakout the defininitions of precursor and reagent chemicals as indicated in the glossary of terms in this document. Recent official documents, for instance, the 1988 UN Convention, use the term essential chemicals to indicate any required chemicals in the processing of drugs. Within this document, the terms reagent and essential chemicals will only be used in the context of a given reference when that was the term used.

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CHAPTER TWO

THREAT ANALYSIS--PRODUCTION

Opium Poppy Cultivation

The opium poppy is thought to have originated in the eastern Mediterranean area and has grown for centuries in temperate climates.[1] It has been cultivated in some countries for legitimate purposes, such as pain medication, cattle feed, fuel, paint thinner, cooking oil, and also for its seeds as spices.[2]

Papaver Somniferum (opium poppy) can be grown in many parts of the world. It prefers warm temperate climates, alkaline soil, low humidity, and it requires only moderate amounts of water through its growth cycle.[3] In fact, excess amounts of water may waterlog and kill the plant if the soil does not drain sufficiently. Extremely arid or very wet conditions will affect the poppy's growth and reduce the alkaloid content. Rainy and cloudy conditions in the late stages of growth will also degrade the alkaloid content.[4]

The opium poppy grows in many types of soil but thrives in an alkaline, sandy loam soil. Such soil retains moisture and nutrients well and provides the poppy a favorable environment for its root structure.[5] The optimum fields have slope gradients of 20 to 40 degrees to facilitate proper water drainage and are orientated to maximize exposure to the sun.

It is a photo-responsive plant; therefore it needs long days and short nights before it will flower and develop its fruit the "seedpod," ("capsule," "bulb," "poppy head").[6] Most illicit opium poppy cultivation occurs at altitudes from 1,200 to 10,000 feet. The altitude of the growing field has little impact on its cultivation or yield but

is an important factor for growth because it controls temperature.[7] The opium poppy is an annual plant; therefore, only one crop may be grown each year in climates that have distinct hot and cold or wet and dry seasons. It must be replanted for each crop because it will only produce fruit once. Countries, such as India, Pakistan, Afghanistan, Iran, Turkey and Mexico, have ideal climates. Burma (Myanmar), Thailand, Laos, and China have less than optimum conditions which limit yields.

> Like all plants poppies need an appropriate temperature with adequate water, light, and nutrients to grow to their full size and to yield the maximum amount of opium gum. If any of these factors is less than optimum, it is said to be "limiting" the growth of the plant . . .[8]

Opium plants are generally given a generous amount of space for each plant. Spacing may vary from one plant to eighteen plants per square meter, but the average is eight to twelve which gives 60,000 to 120,000 plants per hectare. The practice in Colombia is reported to be about one per meter which gives approximately 10,000 plants per hectare.[9]

The opium growing areas of Colombia have generally acidic, volcanic loamy soils, high humidity, high annual rainfall. Their geographic position at the equator gives long daylight hours throughout the year and a tropical to semitropical environment. Colombia provides adequate but less than ideal conditions for cultivation. On one hand growth is limited by high humidity, acidic soil, and high levels of rainfall; but on the other hand Colombia does provide a favorable climate for year-round cultivation.[10] The plants must be replanted after each harvest and require an average of 120 days to mature.

Opium gum yield varies greatly. A 1992 Department of State, Bureau of International Narcotics Matters, study conducted in northern Thailand showed that yields may vary from as much as about 5 kilograms of opium gum harvested per hectare to as much as 36.8 kilograms. Two-

thirds of the yields were between 8.6 and 12.2 kilograms. The Thailand study proved an average of about 11.5 kilos per hectare.[11]

The 1995 International Narcotics Control Strategy Report provides data which estimates average annual worldwide opium production yields for 1993 and 1994. The highest estimated yield was the Afghanistan yield of 32.5 kilos of opium gum per hectare in both 1993 and 1994 to a low estimated yield in Laos of 4.5 and 6.9 kilos per hectare respectively.

However, yield per hectare is not the only determinant of a country's production, however. For example, although Burma has a lower yield per hectare than that of Afghanistan, it produced an estimated 2,575 metric tons of opium gum in 1993 due to the massive hectarage in cultivation and to the ability of guerrilla groups to control the illicit operations and because of the lack of legitimate authority in the region.[12] Through 1994, Colombia's opium gum yield was estimated at 200 metric tons per year based on 20,000 hectares of total annual cultivation at 10 kilos yield per hectare. In 1995, Crime and Counter-Narcotics Center (CNC) dramatically decreased their estimates of opium production to 65.4 metric tons of opium gum based on 6,540 hectares total cultivation (2,180 actual hectarage times three harvests per year) with an estimated yield of 10 kilos per hectare.[13]

The data provided is based on the premise that Colombian fields may harvest up to three to four times per year, whereas the Southeast and Southwest Asian fields harvest only once per year.[14] In Southeast Asia's, "golden triangle," tropical climate and typical altitudes for poppy cultivation are similar to that of Colombia, but major differences exist which affect the differences in the poppy growing seasons between those countries. Southeast Asia has distinct wet/dry seasons and the latitude of the "golden triangle" is much higher than the latitude of Colombia's growing areas; the majority of which have long growing days year-round because they are concentrated near the equator.

Additionally, Colombia has a lack of distinct seasons which could limit the growing season(s), but it provides the ability for year-round poppy cultivation.

Yield per hectare is the area where the environmental conditions versus crop estimate disparity surfaces. Colombia's opium gum yield is estimated to be lower than the yields of Southwest Asia and some other more traditional growing areas, but the yield per hectare per harvest is estimated at the worldwide average. A comprehensive study is not yet available to reconcile these disparate notions.

Harvests of the opium poppy may be conducted up to 3-4 times per year depending upon growing conditions. According to the September 1995 DEA "Intelligence Bulletin--Colombia", the opium poppy is able to mature in 90-140 days, therefore three crop harvests per year are possible. According to Dr. Eric Rosenquist of the USDA, International Research Programs, two crops per year is a more likely figure. But in most areas of the world one harvest is made per year over about a 5-week period. Dependent upon the initial planting, whether early or late in the season, the harvest timespan will vary.

A harvest consists of multiple scores (lances or cuts) on the mature seed capsule up to four to five times at three to four-day intervals over a two-week period during that growing season. Single or multibladed knives are used to score the seed capsule. The scores are approximately one millimeter deep which cuts tiny tubes within the capsule to allow the milky white gum (latex) to seep out from the cuts overnight and dry to a dark brown gum. If the cuts are too shallow the latex flow will be slow and latex will harden in the pod, and if cut too deep, the latex will flow too fast and drip off the plant to the ground.[15] The latex is then scraped off the capsule the following day.

During the Thailand study, an estimated 85 percent of the maximum yield was obtained by using the method described above. Approximately 40 percent of the yield was obtained with the first

scoring. Subsequent scoring yielded about 30 percent, 20 percent, then 10 percent of the total harvest. The number of plants per square meter also vary greatly from one to sixteen depending on the region.[16]

Eradication

Efforts by law enforcement to eradicate opium cultivation and to control the increasingly abundant crop are hindered by hostile guerrilla action, mechanical problems, lack of spare parts for equipment and helicopters, lack of approved fields (targets) to spray, extreme terrain features, accessibility, and often adverse weather conditions.[17] These opium-growing areas provide favorable terrain for guerrilla groups such as the Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army (ELN); these groups control the opium trade and field security.[18]

Current operational methods of eradication in use in Colombia include aerial spraying of glyphosate (commercially known as 'Roundup'). This method was approved by the Government of Colombia in January 1992. The other method is manual, pulling or cutting the plants and then burning them.[19]

Glyphosate, or 'Roundup', is currently used in numerous countries including: Mexico, Belize, Panama, Jamaica, Pakistan, Burma and Colombia as a means of destroying illicit crops.[20] With desiccant type agents such as glyphosate, the chemical kills the above ground part of the plant by drying or burning it. While the chemical is effective in killing the plant, poppy farmers are aware of its biodegradability and often replant the eradicated fields within two weeks of spraying. The seeds in the capsules are not damaged by the chemical, in fact the seeds tend to rapidly mature within the capsule of the dying plant and can potentially replant themselves. These fields thus require respraying within 60 to 90 days.[21] In addition to replanting, farmers have been reported to be protecting their crops from the effects of glyphosate by applying a mixture of molasses and water to their crops.[22]

What is needed in order for there to be a systematic aerial spraying and respraying program in the drug areas of Colombia is both an ongoing, effective police presence and adequate quantities of resources such as Bell 212 helicopters, Ayers T-65 Turbo Thrush spray airplanes, spare parts, trucks, jeeps, communication equipment, and herbicides. Given these limitations, little respraying gets accomplished.[23] Opium poppy eradication figures for 1992 show seventy percent of the estimated crop eradicated, while in 1993 only fifty percent of the estimated crop was killed.[24]

Manual eradication, pulling up the flowers (or coca or cannabis plants) and then burning them is also conducted in Colombia. Hundreds of hectares are manually eradicated each year.[25] Crop substitution and alternative development programs such as encouraging the farmers to cultivate legal crops by assisting them through financial aid or labor assistance are often tied to manual eradication operations. This subject will be discussed later in this section.

Potential biological methods of eradication have been under study for several years. One area in which significant progress has been made is with the development of biological herbicides. One alternative to chemical spraying is the use of microbial or mycoherbicides which can be applied by aerial spraying. The agent produces rapid but short-term control of the pest plant because after killing the the host plant it is unable to survive either in the soil or on the dead host plant.[26]

By 1988 there were two commercial mycoherbicides which were being used in the United States on a large scale without provoking significant public controversy. The farming communities and cooperatives that used them were thoroughly trained by the manufacturing companies about their properties and requirements for their safe and effective use. Some variations of the pathogens were indigenous to the

affected regions; this fact helped to gain acceptance for the agent in these communities.[29]

As public discussion continues over the use of genetically-engineered organisms, the possibility has risen that indigenous organisms might be regulated in the same way as commercial mycoherbicides. "Fungal pathogens are considered to be the only group of micro-organisms with potential for the classical biological control of weeds."[28] Biological control is the use of one or more organisms (biotic agents) to maintain another organism, the pest plant, at a level where it is acceptable.[29] In other words, biological control is targeting a pest plant with an organism that interacts with and kills or weakens the pest. Biological control has been considered only as an option of last resort; when other control measures have failed or have been appraised as environmentally undesirable.[30]

Although the introduction of an alien plant pathogen into a country or geographic region could cause problems such as environmental disasters, health concerns, political fallout, and public outcry, the rust fungi, a fungal pathogen, has all the attributes of successful biological control agents. It characteristically has narrow host ranges (often genus, species, variety, or biotype specific), high reproductive capability, and feasibility for rapid and efficient aerial dispersal.[31]

> The prospects for mycoherbicides look good, as there are now several successful commercial products available and more in development. They are being developed primarily for use where chemical herbicides are environmentally unsatisfactory, too expensive, or where resistance is developing . . . mycoherbicides fit into the "greening" policy of the agrochemical companies and can be marketed by them.[32]

Mycoherbicides appear to be a viable prospect for future eradication measures in cases where chemicals are threatened with restrictions on aerial spraying; especially when the health of inhabitants and environmental damage from chemical runoff are the reasons touted as justification denying the use of chemicals.

While chemical and mycoherbicides have potential for effective crop control, crop substitution has been administered in Colombia and other drug producing countries with varying degrees of success.

> With the failure of crop eradication everywhere, and with the control of precursor chemicals, so far, having inconsequential results in affecting drug production, renewed energy has been to crop substitution, the third principal policy initiative to control the supply of illicit drugs.[33]

A long-term approach to beating the cancer of illicit drug production and trafficking may lie in combination--crop substitution and rural economic development programs.[34] "The solution . . . is not one of high-visibility, high-speed strikes, which have cost millions of dollars and a number of lives."[35] Mr. Charles S. Park in The Atlantic suggests that eradication, preparation of the land for legal crops, procurement of seeds or seedlings, planting, and construction of dams, bridges, and secondary roads should all be part of a comprehensive alternative rural development program. He also suggests that the burden of these programs should be on the countries involved, both supply and demand side countries.

A joint U.S. and United Nations Fund for Drug Abuse Control crop substitution program was initiated in 1985 in El Morro, Cauca State, Colombia, after the coca boom or "bonanza" of the late 1970s. This program was a five million dollar, five-year program which included the introduction of alternative crops, such as coffee and sugar, to eradicate coca bushes and provided technical assistance, equipment, and seeds to the farmers which directly impacted about 10,000 people. Plus the program built roads, schools, and water systems which served a population of about 150,000 people.[36]

> With its long term goals and painstaking approach, and with a relatively small amount of money, the project contrasts sharply with the headline-grabbing, US supported raids in Bolivia . . . But people here believe this follow on approach is far more likely to win the hearts and minds of the coca growers in South America in the battle to attack the cocaine production problem at its roots.[37]

Rural development programs are designed to lure the farmer to legal crops, raise the community from poverty and secure the area from

guerrilla control. With newer agricultural techniques and improved transportation links such as roads and shipment centers the programs are attempting to build a durable legal crop economy to prevent a recurrence of the former coca boom.[38] Where these farmers live in fear of police raids and guerrillas collecting taxes and recruiting, these programs give them an alternative to the life of violence experienced while involved with the drug trade. One farmer said, "It seemed like someone was getting killed every week [in his village]." Another said, "You earn a lot of money, but you have to get a gun to protect your crop, which could lead you to murder someone or be murdered yourself."[39]

Another view on crop substitution is that the theory that farmers making their living growing poppies or marijuana or coca can be easily persuaded to grow legal crops and be weaned from illicit ones is erroneous; "But the fact is that crop substitution by itself usually does not work."[40] U.S. House of Representatives, former Chairman of House Select Committee on Narcotics Abuse and Control, Charles B. Rangel said, "Yes, they're raising the substitute crops. But they're growing all the opium, too [referring to a Thailand program]."[41] A House Narcotics committee report from June of 1984 stated, "Reports have been made that fertilizer provided for substitute crops has been used to enhance opium production."[42] Note that fertilizer may also be used in the initial stages of refinement as a reagent chemical in the processing of opium gum to morphine.

> A United States Agency for International Development report stated, "No one crop, and probably no combination of crops, will fully match the income generated from the sale" of narcotic crops. "Accordingly," it added, enforcement and eradication "Are the sine qua non (an indispensable or essential thing) for the successful implementation" of crop substitution programs.[43]

In 1989, William Bennett, then Director of the Office of National Drug Control Policy, discussed foreign policy issues regarding drug producing nations in 1989. Much of his attention had been focused on the demand side of the "drug dilemma" since his appointment to that job. Supply strategies had emphasized, in the past, eradicating drug

crops and ways to increase effectiveness of law enforcement activities in producer countries. His new emphasis was on U.S. policy toward domestic matters starting with examples of drug wars in the nation's capitol. The Bogota, Colombia, Police Chief stated that: "It was rather comforting that he (Bennett) began with Washington D.C. and not Bogota."[44] The previous comment most assuredly has a double meaning; the obvious, plus a cloaked reference to Washington D.C.'s Mayor Marion Barry's 1990 cocaine arrest and criminal conviction as an indication of the United States resolve in reducing the demand for illegal drugs. That reference is a common response from Latin American officials while discussing the drug war. But Bennett emphasized that,

> The United States must have a producer-country program; "It doesn't have to be final and comprehensive," he said, "but it is important and essential that any strategy have an international component. You can't rally the American people to your cause if you don't fight drugs on every front."[45]

Production and Refining Opiates

A multitude of heroin processing methods exist. Many chemicals are used alternatively depending upon availability of the reagent and precursor chemicals. For instance, the following description of converting opium gum to morphine base uses acetic anhydride, while benzene has become the preferred chemical for the same part of the process in Colombia due to availability considerations with respect to the chemicals. The results have been mixed because the chemical benzene is far more dangerous to handle and is very damaging to the environment when dumped after use.[46] But the chemical toluene is now more readily available than benzene, thus has become a popular choice for this use.[47]

Opium gum must be cooked before beginning the process of extracting morphine from the opium. Once cooked it is called "smoking opium." In the traditional growing areas such as Southeast or Southwest Asia this is the most likely form of use. Cooking may be accomplished at or near the field by the farmer, or it may be taken directly to a

laboratory for the entire process of cooking through heroin HCL to be completed.[48]

Raw opium gum is placed in a cooking pot of boiling water. The cooking pot may be a common cooking pot or it may be as large as a 55-gallon oil drum. The gum quickly dissolves in the boiling water at which time twigs and plant scrapings float to the top where they can be skimmed from the surface. The solution of "liquid opium" is strained through cheesecloth to remove remaining impurities. The "opium in solution" is then reheated for water to turn to steam and evaporate leaving a thick paste called "prepared opium".[49]

The next required step is the extraction of morphine from opium. Opium gum converts to morphine at a ratio of about 10 to 1. If the opium gum was not cooked prior to shipment to the processing laboratory, the first step of cooking will occur and the chemical processing begins without the opium paste evaporation stage completing its cycle. While still in the 55-gallon drum or other pot, slaked lime or another high lime content chemical, often fertilizer, is added to the "liquid opium" solution. The lime acts as a reagent converting water insoluble morphine solution into a water soluble calcium salt (calcium morphenate). The other alkaloids in the solution do not react to form calcium salts but remain part of the "sludge." The morphine solution is then poured through a filter, usually a burlap sack or cheesecloth material. The solution is then reheated and ammonium chloride is added to adjust the alkalinity from 8 to 9. Over the next few hours, the morphine base will precipitate out and settle to the bottom of the container. The chemist then pours the solution through the filter. The chunks of morphine base remain as solids in the filter and in the container. The morphine base is squeezed and dried, and remains a coffee colored powder. Morphine base may be purified and converted further by dissolving the powder in hydrochloric acid (muriatic acid),

adding activated charcoal (activated carbon) and reheating and filtering the solution several times. The resultant compound is morphine HCL.[50]

The conversion of morphine to heroin may occur at the same lab, but the precursor compound is often transported to another more sophisticated lab. Morphine to heroin is a synthesis on approximately a 1 to 1 ratio.[51] This synthesis, or a combining of compounds to become another product, involves using either morphine base or morphine HCL compounds to make heroin base by the following procedure.

The morphine powder is pulverized and placed in a cooking container and acetic anhydride (acetic oxide or acetyl oxide) is added. Then the container lid is clamped on with a damp cloth for a gasket. The solution is heated for about two hours at just under a boil. The solution is never heated to a boil nor are the fumes allowed to escape. The container is agitated for a sufficient time to dissolve all of the morphine powder. A chemical bond occurs between the morphine and the acetylating agent which forms an impure mixture of diacetylmorphine (heroin).[52] The solution is mixed in a pot with water and a small amount of chloroform (trichloromethane) as a solvent, stirred and then allowed to sit a short time. While sitting, the mixture precipitates a greasy, red liquid. A watery layer forms at the top which is poured into a clean container. Activated charcoal is added to the clear, watery liquid and further filtered to remove solids. The remaining liquid is a light yellow color. Charcoal will be mixed in and filtered until the solution is clear or colorless. Next, sodium carbonate (soda ash) is dissolved in hot water and gradually added to the solution. The heroin base first precipitates and then is filtered out and heated on a steambath until completely dried. If the powder is not white at this stage, the heroin base will be redissolved in acid, purified with charcoal, and re-precipitated and dried. Purity at this point is critical to the resulting purity of the heroin HCL final product.[53]

An additional step that skilled chemists in a controlled environment will take is a hot filtration step. Ethyl alcohol is heated to a boil, then the heroin base is mixed in and stirred until dissolved. The solution is filtered through a Buchner funnel and poured into a heated container. This step removes traces of sodium carbonate from the base. The substance is cooled quickly and the alcohol will be recovered for reuse by using a vacuum filter. The resultant compound is "alcohol morphine base" or recrystallized heroin base.[54]

Next comes the final stage in processing heroin base to heroin no. 4. Ethyl alcohol, ether, and hydrochloric acid are measured out. The heroin base is combined and heated with half of the alcohol and a third of the acid until dissolved. The second third of the acid is slowly stirred into the mixture. Then the last part of acid is added drop by drop. When completed the heroin is completely converted to HCL and the remaining alcohol is added, then half of the ether is stirred in and allowed to sit for a short time. The mixture is extremely volatile at this stage. Small crystals will begin forming. Once this starts, the remaining ether is poured into the container at once. The mixture is stirred, covered and allowed to set up for up to an hour. At this point the mixture is nearly solid and is filtered and the solid crystals are placed on clean filter paper and wrapped. These bundles are placed on wooden trays over lime rock to dry. Once dry, the pure heroin HCL (no. 4) is packaged for shipment. A normal batch of heroin weighs from five to ten kilograms (kilos).[55]

The ability for traffickers to process the raw materials depends heavily upon their ability to acquire precursor chemicals. The subject of the clampdown on precursor chemicals is an international political football being kicked about by numerous nations including the United States, Germany, Hong Kong, Mexico, Brazil, Paraguay, Colombia, and others on the basis of the 1987 United Nations conference on drug abuse and illicit trafficking which calls for the reporting of

"significant movements of precursor chemicals."[56] Brazil is the only South American country that manufactures industrial quantities of ether and acetone, which is required in the production of both heroin and cocaine, but has "hardly any control over the chemicals."[57] While the regulation of these chemicals is an obvious requirement in the reduction and control of the illegal drug trade, serious drawbacks have surfaced which have introduced new health hazards.[58] "A clampdown on supplies of solvents, acids, and other pharmaceutical-quality substances"[59] has forced the drug producers to use alternate chemicals which are more dangerous to the chemists to handle, and the drug user to use. Benzene and gasoline are being used as substitutes for ether and acetone. These alternate chemicals leave residue in the finished product that is toxic to the user; benzene is a carcinogen, and gasoline available for processing in South America contains lead which produces lead poisoning in the user.[60]

Summary

Colombia provides favorable year-round growing conditions for the opium poppy in the mountainous terrain of the Andes range. However, limitations to growth do exist in the area which strongly affect the crop's yield. The generally acidic soil makeup and excessive moisture in the form of humidity and rainfall, which both affect the alkaline content and yield of the plant, are the predominant drawbacks to cultivation there. Agricultural factors which positively contribute to the success of opium cultivation are the long growing days and short nights which result from Colombia's position latitudinally on the Equator, the long growing season (year-round), and good slopes which facilitate proper drainage. The lack of distinct seasons in Colombia and the factors listed above provide conditions for multiple crops to be harvested from each plot of land per year.

Opium gum yield is estimated to be lower than that of competing regions such as the Golden Crescent of Southwest Asia and the Golden

Triangle of Southeast Asia. Evidence exists that opium producing experts from these regions have been imported to Colombia to teach various facets of the operation to the campesinos (farmer peasants), so it stands to reason that yield will increase with time in this region as cultivation techniques are improved.

Eradication efforts in Colombia continue to achieve lower than desired or expected results. In 1992 approximately seventy percent of the estimated crop was eradicated and in 1993 only fifty percent of the estimated crop was eradicated. Law enforcement efforts to reduce or eliminate illegal drug crops are hindered by hostile guerrilla action, mechanical and supply problems, accessibility and adverse weather. What is needed, in order for there to be a systematic aerial spraying and respraying program in the drug areas of Colombia, is both an ongoing, effective police presence and adequate quantities of resources such as Bell 212 helicopters, Ayers T-65 Turbo Thrush spray airplanes, spare parts, trucks, jeeps, communications equipment, and herbicides.

Biological methods for crop eradication are available in the form of mycoherbicides which are fungal pathogens that have had success in controlling weeds. These agents can be aerially sprayed onto the fields in the same manner that chemical agents are currently applied. But biological eradication has distinct disadvantages, such as political hurdles, to overcome before a program of this nature can be started. Other drawbacks are its limited effectiveness, due to its slow acting behavior and its inability to survive in the environment without the host plant.

It is suggested that the solution to the eradication problem is not aerial spraying and raids and arrests, but alternative development programs supporting the rural areas, where drug growing economies are thriving, with farming assistance and infrastructure development. Although that approach sounds good, it alone is not the answer because something has to occur which adversely affects the campesinos ability to

make a living growing the raw materials or makes a definite positive impression on them to change the crop by seeing a better way of life through alternate means.

The processing of opium gum to heroin usually begins at or near the growing field by processing raw opium into prepared opium, morphine base or morphine HCL. The prepared compound is often transported to a more sophisticated laboratory where conversion of morphine into heroin occurs. Precursor and reagent chemicals are obtained illegally or diverted from legal sources to the processing facilities. The clamp-down on the import and manufacture of these chemicals, although an obvious vital requirement toward reduction of the problem, has resulted in the chemists using more dangerous alternative chemicals which are often more hazardous to the chemists, to the environment, and to the drug user due to the toxic residues of the alternate precursor and reagent chemicals.

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[5]Eric Rosenquist, Ph.D., Opium Poppy Cultivation and Heroin Processing in Southeast Asia, 5.

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[8]Thailand: Opium Yield Study Results, Department of State Publication 10020, Department of State, Bureau of International Narcotics Matters, 1992.

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[13]"Colombia Opium Poppy Crop Estimates, 1995," Crime and Counter-Narcotics Center, Central Intelligence Agency, September 1995.

[14]Colombian Opiate Assessment, Drug Intelligence Report, Drug Enforcement Administration, U.S. Department of Justice, June 1994.

[15]Opium Poppy Cultivation and Heroin Processing in Southeast Asia, 10.

[16]Thailand: Opium Yield Study Results; White, p. 157. Cultivation and production techniques vary greatly from region to region in almost every regard. For instance, according to Peter White's National Geographic article printed February 1995, p. 157, "Villagers tell me the second lancing yields better than the first, the third is the best, and the fourth and fifth very poor; but every little bit is wanted." This information is contrary to findings in the International Narcotics Matters Thailand Study which shows the first lancing is the best and decreases at an approximate linear rate thereafter for four

times. This example holds true for nearly every facet of cultivation through processing.

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CHAPTER THREE

THREAT ANALYSIS--MARKET

Why the shift to heroin?--Demand and Supply

This chapter will address issues relating to a combination of economic principles on the supply side and sociological and possibly physiological principles on the demand side. This research is primarily oriented toward the supply side of the heroin trade equation but several demand side factors are pertinent and will be discussed initially.

Demand Side Factors

Multiple theories seek to explain why the United States is seeing an upswing in the heroin trade. No definitive survey or census has been conducted to prove the upsurge, but evidence from health care officials, emergency room visits, researchers, and law enforcement officials indicate the upsurge is real.[1] New York has long been the "national center for heroin distribution and [is] where 200,000 of the country's estimated 500,000 heroin addicts live."[2] Although the cities of the Northeast U.S. have the vast majority of addicts and users, heroin has become a nationwide problem throughout the socioeconomic strata.[3]

One theory explaining heroin's upsurge in popularity is the ten year cycle. The idea is that about every ten years a new drug takes the lead as the "in thing" and the previous leader loses its popularity. As Joseph Treaster argues in his July 1990 New York Times article:

> The growth in heroin use comes as evidence is accumulating that the consumption of crack and powdered cocaine has peaked and may be declining. And it seems to fit the theory of many experts that drug use runs in cycles, with stimulents like cocaine alternating with depressants like heroin.[4]

It is ironic that since "cocaine and crack have turned out to be so extraordinarily destructive" that users now "end up with heroin."[5] Sociologists and officials working at several drug-treatment programs in New York City and within the drug culture have seen many cocaine and crack users shifting to heroin. They have also seen young people bypassing crack cocaine and progressing directly into experimentation with heroin.[6] These fledgling heroin users are too young to remember and hence are unaware that during the 1960' and 70's the use of heroin commonly caused addiction and death. Felix Jimenez, the chief of the heroin division of the Federal Drug Enforcement Administration in Washington, D.C., (1990) said, "I think its going to be the drug of the 90's."[7]

The second phenomenon to be discussed is the combination heroin/cocaine use and addictions. The use of heroin and cocaine together, known as speedballing, supports heroin's resurgence and increases the incidence of spreading the aids virus through the use and sharing of hypodermic needles.[8]

Brenda Gonzales is a cocaine and heroin junkie who lives on the Brooklyn, New York waterfront. She was profiled in The New York Times article "Heroin Is Making Comeback In Lethal Tandem With Crack," where she provided some brow raising insight. After taking a "hit" from her crack pipe, she says, "The crack gets me hyper, . . . I start sweating and I want more crack. So I take the heroin and get calm." She then scooped grains of heroin into her nose snorting the drug.[9]

Another common use of the dangerous combination is taking heroin to "soften and prolong the effects of crack."[10] One Brooklyn woman said, "By following a hit of crack with a snort of heroin, you feel normal--you aren't really normal, but it brings your heartbeat back to normal."[11] Users will often go on crack "binges" of three or four days, which they also call "missions," then will take heroin to bring them down like a sleeping pill. "Heroin's allure, in this era of nerve-

jangling crack, is its soothing quality, leading many to rely on it as a kind of self-medication."[13] Officials have noticed that users are increasingly becoming addicted to both cocaine and heroin, which in turn makes treatment and recovery longer and more difficult.[14]

The third demand side reason for heroin's comeback is its increased purity, increased social acceptance and, likewise, decreased social stigma because of its ability to be administered by means other than the hypodermic needle. "It is being sold at such high levels of purity that users no longer need to confront the hypodermic needle."[14]

Although purity has increased to a point that snorting, smoking, inhaling, and even eating are all viable methods of administration, intravenous injection is still the most popular method and "provides the greatest bang for the buck."[15] Because the alternate methods of taking the drug seem more benign, it has led some unknowing users to believe that it is not addictive if not injected by the needle,[16] but they learn this lesson later, at great pain.[17] While many users administer heroin by these alternate, more socially acceptable methods, they inevitably build a tolerance for it and hence have to resort to injection to achieve the desired feeling.[18]

Intravenous use is most popular because it produces a "pleasurable rush" and is the most efficient use, which is often an important concern due to its high price.[19] One former addict Michael Bethea, who works for a private group that counsels drug addicts in East Harlem and Brooklyn known as the Association for Drug Abuse Prevention and Treatment, describes the shift to intravenous injection or shooting from snorting or smoking as "common sense economics." He asked, "Why should I buy three bags to snort when I can go shoot one bag and feel the same?"[20] Compelling evidence of the increase of heroin purity is contained in the quotation below:

> Federal officials say that Chinese racketeers dominate the heroin trade in New York and mainly import a type known as China White, which is made from opium grown in the Golden Triangle, at the juncture of the borders of Thailand, Laos, and Myanmar, formerly

> Burma. Dominicans, Jamaicans and American blacks serve as the middlemen in New York's heroin business, the authorities say, with neighborhood youths handling street sales. While wholesale prices have declined, the price on the street has remained $10 a bag. But a typical bag now contains 20 percent pure heroin up from less than 10 percent in the past. Often the mix consists of 40 percent or more heroin."

Supply

Due to its clandestine nature, the information on the supply side of the heroin problem is even less quantifiable, verifiable, and reliable than that on the demand side. Additionally, it is often hazardous to officials or reporters to investigate or report on locations of drug cultivation, processing or transactions.[22] This shortage of information casts doubts on the information that is available because it is often unverifiable and is not supported by multiple independent reliable sources.

A cocaine slump or a reduction in demand for cocaine during the late 1980's led some coca growers in Colombia to switch to opium poppies which gave a 20 to 100 percent more return than cocaine.[23] According to Mr. Mike Van Fleet of the Crime and Narcotics Center, Financial Crimes Division, heroin yields profits to the producers on the order of ten times that of cocaine.[24] The DEA's Colombian Opiate Assessment states that a kilogram of heroin costs eight times more than a kilogram of cocaine. According to the U.S. Department of State 1993 Drug Strategy Report, the "Latin American drug trafficking organizations may be looking to heroin as the drug of the new century."[25] Heroin may be the drug of the next century because the profits from its manufacture and sale are so much greater than that of cocaine, the present jewel of the south. Robert Sabbag analyzes the profit motive as a simple business consideration. "A kilo of coke is worth between $11,000 and $42,000 wholesale; a kilo of decent heroin currently goes for between $80,000 and $250,000."[26] Given that the production costs for heroin and for cocaine are comparable, and that trafficking costs are also comparable, the difference in profits from cocaine to heroin is massive.

Because of the nature of the Colombian drug trade, stretching from the small heroin trafficking groups to the well established cocaine cartels, no new alliances [in the heroin trade] need be forged in Colombia.[27] "The Heroin Trade has always been an enterprise of shifting alliances. The Colombians will change that."[28] Latin American heroin (Mexican brown and black tar heroin and the Colombian heroin) holds about 20 percent of the U.S. market about the same as Southwest Asia heroin. As long as Colombians are in the cocaine business and given the demand side factors of the heroin trade discussed earlier, "one can expect to see heroin show up wherever one finds cocaine."[29] Harold D. Wankel, DEA's deputy assistant administrator for operations (1994) said that the DEA is seeing that as the traffickers bring cocaine to their customers, they will also bring some heroin to the table. "They say, 'You want this cocaine, you take this heroin as well.' They're trying to force it to create a market."[30] Another marketing technique employed by the Colombian traffickers is "the freebee." They offer to "front" ounce and multiounce quantities of heroin to first-time buyers knowing they will recoup the loss later when the buyer's dependency on the drug is more ingrained.[31]

Regarding the dramatic rise in purity of heroin in a mature, well entrenched, relatively stable industry, Richard Frank, the DEA's Office of Forensic Science associate deputy/assistant administrator said, "It could mean that somebody is trying to create a market for his product."[32] Wankel said, "There's just a glut on the market."[33] In the Northeast, "where some dealers of crack cocaine are providing free heroin samples. Supply can create demand."[34] On the supply and demand equation Wankel said that in 1980, "there were no heroin addicts in Pakistan, period." Pakistan now (1994) has one million addicts (twice that of the United States) and has only half the population of the United States. This phenomenon is characterized as manufacturing

spillover--meaning that an overabundance of heroin is available in Southwest and Southeast Asia.[36]

The Colombians are undercutting the heroin market in price and also providing a high purity product.[37] The competition for highly pure street level heroin requires that a high grade product be smuggled into the United States. This seems to be dictating the Colombian requirement that the purity of Colombian smuggled heroin be 80 to 99 percent. Street level purity for Colombian heroin averages over 60 percent while the overall national average from all the producing regions is 40 percent.[37] These figures are significant in understanding the heroin picture--the status of a mature well entrenched market, where just ten years ago the average street purity was 7 percent and in 1991 the average was at 26 percent.[38]

The 1994 NNICC report on pricing figures was published in August 1995; it showed that Colombian heroin retail prices per kilogram were $15,000 to $80,000 less than the most expensive Southeast Asian heroin and that the maximum price of Colombian heroin was less than the maximum prices of either Southwest Asian or Mexican Heroin. Additionally, the Colombian price range distibution is much narrower than that of any of the other heroin producing regions.[39] This pricing strategy could indicate the Colombians are using some restraint in their business practices in dealing with their retailers and possibly requiring some restraint from price gouging or other forms of business malpractice in turn from their street retailers. Most probably, the Colombians are using this technique to create decidedly Colombian heroin buying habits among their customers while retaining the corner on the cocaine market and nudging the other regional areas of heroin competition to a less prominent status in the market. Though Colombian heroin is not yet widely available in large (kilogram or more) quantities due to production limitations,[40] and despite an existing high level of competition in the world heroin market, the Colombians,

nonetheless, appear to be carving themselves a large niche in the U.S. heroin market.

Growing U.S. demand, the high level of purity, relative price stability, and an abundant availability of heroin in the markets on the streets of the United States indicate an increasing worldwide production of opium and heroin.[41]

With trafficking channels well established by the cocaine business, the selling of heroin should fit easily into the system while providing far greater profits.

Scott MacDonald, in his 1988 book Dancing on A Volcano identifies four major reasons for Colombia's preeminent position in the Latin American drug trade; all of which directly translate to their success in the world market. First and most importantly, Colombia holds an advantage in its geographical position on the South American continent and in the Western hemisphere. It is positioned near Peru and Bolivia, both of which produce coca, and is adjacent to Peru and Ecuador both of which grow the opium poppy.[42] The Colombians purchase the opium or coca, process it and market it. When the Government of Colombia began locating laboratories and making arrests the drug producers responded by relocating their processing sites out of Colombia to adjacent remote areas in Ecuador and Brazil.[43] Colombia is also located on the "routes through the Caribbean and Central America that lead to the lucrative North American and European markets."[44] There are three international airports and 150 clandestine landing strips located near Colombia's north coast which are involved in the illegal drug trafficking.[45]

Secondly, Colombia and the surrounding countries geographical makeup offers the following assets: vast forests which "effectively conceal clandestine processing laboratories and airstrips that facilitate the traffic;"[46] extensive river waterways as an effective means of transportation for manpower, guerrillas, precursor chemicals,

and the final product; and rich agricultural attributes allowing the cultivation of the base material.[47]

The distinct geographical factors have provided fertile ground for the traditional smuggling industry which dates back as early as the 1500s in the form of gold, silver, rum, guns, skins, and food.[48] This constitutes the third reason--"the strong entrepeneurial skills of the Colombian people and their early involvement in the trade."[49] The Colombian drug trade has "evolved from small, disassociated groups into compartmentalized organizations."[50] These groups are extremely sophisticated and exhibit a logical, systematic approach in applying sound "business ability and distribution expertise" to their drug trafficking networks worldwide.[51]

The fourth reason Colombians have held a preeminent position in the drug trade has been the abundance of Colombians within the United States who are willing to play any of the roles required by the business distribution network for the Colombian products.[52]

Although the purity of recent Colombian heroin is comparable to that of Southeast Asian heroin, Colombian cultivation procedure and agricultural conditions do not yet provide opium gum yields equivalent in quantity nor alkaloid content to that of other traditional growing regions; in addition, the processing efficiencies which are common in the other growing regions have not yet been perfected sufficiently to produce equivalent quantities of the final product from a given quantity of raw material. The factors listed above, plus the existance of a heroin glut on the market, may explain why there has not been a major or complete shift from cocaine to heroin by the Colombians.

Reports of a strong Lebanese connection which trades South American cocaine for Southwest Asian heroin brings in the possibility for a large future waypoint or import/export heroin business through Colombia.[53] "Before significant opiate production occurred in Colombia, drug traffickers routinely exchanged Colombian cocaine for Southwest

Asian heroin."[54] Several DEA investigations in 1992 that studied the cocaine and Lebanese heroin exchange concluded that either the heroin was being transported to Colombia in a waypoint arrangement or that it was transported to Colombians in the United States, bypassing middlemen, in a throughput arrangement in exchange for cocaine.[55] Under the Lebanese connection or a similar arrangement with other regions, both parties increase profits because heroin prices are higher in the U.S. than in Europe (the usual destination for the majority of Southwest Asian heroin), and cocaine prices are higher in Europe than in the United States.[56] Because Colombian traffickers continue to trade Colombian cocaine for Lebanese heroin, and heroin produced in various other regions continues to be discovered in Colombia, accurate "estimates of Colombian heroin production become more difficult."[57]

Cartels

"As Colombian drug traffickers position themselves to become key players in the heroin trade and if the heroin situation is left unchecked, Colombia will emerge as a significant exporter of heroin in the near future."[58]

At present, the Colombian cartels are only minimally involved in the heroin trade. But as the U.S. heroin market develops an increased desire for South American heroin, whether it is impressed by price differential, consistently higher purity, quality business relationships with Colombian traffickers and drug dealers, or even coercion, Colombians could expand their illicit drug trade. This expansion could be accomplished by slowly expanding the capabilities of the existing cocaine transportation and distribution network so as to smuggle larger amounts of heroin to the United States. As pointed out earlier the size and weight are comparable, but profit ratios are far greater for heroin than for cocaine; therefore, profits could conceivably be greatly increased by merely changing the cocaine to heroin ratios in the shipments.[59]

While the heroin trade appeals to both of the large drug cartels (Cali and Medellin), the Cali Cartel has shown more interest and has better access (by proximity) to the primary opium cultivation areas of Colombia. Looking ahead, it appears that the Cali Cartel will be in the best position to dominate the smaller heroin trafficking groups that are now operating freely due to the fact that all of the primary leaders of the Cali Cartel have "shown interest" in the budding Colombian heroin business.[60] Members of this cartel are known to have transported heroin along with shipments of cocaine. They also control large parts of Colombia's poppy growing areas through coercion and are "suspected of forcing local campesinos into growing opium poppies."[61]

Summary

The shift to heroin is affected by multiple factors on both the supply and demand side of the problem. On the demand side, three comingled factors have been identified as important.

The ten-year cycle is an explanation in which popular drugs rotate from depressant to stimulent types over an approximate ten-year period. This may be a valid explanation; in the sixties and seventies, heroin was popular whereas during the eighties it was cocaine. By the late eighties a demand side slump for cocaine had occurred; now in the nineties heroin is making a comeback.

Dual usage of, and dependencies or addiction to both heroin and cocaine is a common situation among drug users. With dual dependencies, heroin is often used to take the edge off of a cocaine "high" or "mission," to "soften and prolong the effects of crack," or to bring the user's heartbeat back to normal. This kind of use is proving to make treatment difficult and to prolong recovery.

Increased purity of street level heroin has, in effect, aided in social acceptance of the drug. Because the purity has increased, heroin is no longer required to be injected for a user to feel the effects of its poison. Since it can effectively be administered

through, primarily, snorting or smoking, and since one does not have to use a hypodermic needle, social stigma is decreased and acceptance by society is greater of softer drug use. Eventually, however, a tolerance is built and the previously softer user will have to resort to the needle to feel the effect or rush of the heroin.

Supply side factors are less verifiable given the clandestine nature of the illegal drug trade and the hazards encountered in attempting to collect the facts.

Profits for heroin are in the neighborhood of eight to ten times the profits generated by the sale of cocaine. Assuming the overriding motive of illicit drug producers and traffickers is the generation of profits, the greater profit making venture will be afforded the most attention and effort.

Because of a glut in the worldwide heroin market, and because of limitations on the production capabilities of the Colombian producers to consistently produce large quantities of heroin, Colombian traffickers have apparently been forced to slowly integrate the product to the market using carefully planned marketing techniques. These techniques include encouraging dealers to buy heroin from them as a condition of sale of cocaine in "package deals", giving free samples to users in hopes of establishing future loyal customers, providing competitively high purity heroin of quality rivaling that of Southeast Asian no. 4 heroin, and consistently undercutting the market price of other regionally produced heroin.

Colombia has superb physical attributes to foster the heroin trafficking industry. It is positioned with access to the Pacific Ocean and to the Caribbean Sea and to Central American routes which carry the flow of cocaine, heroin and marijauna northward to U.S. and eastward to the European markets. It is adjacent to the other two South American opium poppy producing nations of Peru and Ecuador. Colombia has hundreds of clandestine airstrips and several international airports all

of which have been involved in the illegal drug trade and also has thousands of miles of waterways useable for transportation of raw materials, personnel and finished products to and from various destinations.

Foreign cocaine for heroin trading relationships are known to exist between Colombian and Lebanese traffickers. European heroin markets are the prominent destination for Southwest Asian heroin (in which the Lebanese trade) while Colombian cocaine is normally sent to U.S. markets. In both cases, the "overseas" market provides the greatest profit, and thus, in these trading arrangements, the drugs are traded in appropriate ratios to justify the effort and generate anticipated profits. The "Lebanese connection" and other similar arrangements complicate production estimates and other law enforcement activities. The connection also increases the probability of the Colombian trafficking organizations moving into a more purely trafficking business with reduced importance on cultivation and processing.

Growing U.S. heroin demand, refined marketing techniques, convenient geographical positioning, well established cocaine trafficking channels, and various transoceanic business designs, all place the Colombian heroin cartels and trafficking organizations in a prime position to dominate the U.S. heroin market in the next two to four years.

Endnotes

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[3]Robert Sabbag, "The Cartels Would Like A Second Chance," Rolling Stone, 5 May 1994, 35, 37, 43; Colombian Opiate Assessment, 14.

[4]Treaster, 1, 26.

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[14]John Kaplan, The Hardest Drug: Heroin and Public Policy, (Chicago: University of Chicago Press, 1983), 10.

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[22]Scott B. MacDonald, Dancing On a Volcano: The Latin American Drug Trade, (New York: Praeger Publishers, 1988), Preface.

[23]Mark A. Uhlig, "Colombia Tries to Shift Crops," New York Times, 3 July 1989, 2.

[24]Mr. Mike Van Fleet, Crime and Narcotics Center, Financial Crimes Division, interview by author, 19 December 1995.

[25]Sabbag, 37.

[26]Sabbag, 37.

[27]Sabbag, 37.

[28]Sabbag, 37.

[29]Sabbag, 37.

[30]Sabbag, 37; In context, the retailers are more than likely not forced to take the heroin, but instead would be encouraged by the profit motive as well as buying it as a prudent business practice in maintaining the working relationship with the wholesaler.

[31]Colombian Opiate Assessment, 15.

[32]Sabbag, 36.

[33]Sabbag, 36.

[34]Sabbag, 36.

[35]Sabbag, 36.

[36]Colombian Opiate Assessment, 15.

[37]Colombian Opiate Assessment, 14; NNICC 1994, viii,31.

[38]NNICC 1994, viii.

[39]NNICC 1994, 31.

[40]Colombian Opiate Assessment, 15.

[41]NNICC 1994, viii.

[42]NNICC 1994, 46.

[43]Scott B. MacDonald, Dancing on a Volcano: The Latin American Drug Trade, (New York: Praeger Publishers, 1988), 28.

[44]MacDonald, 28.

[45]MacDonald, 23.

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[48]MacDonald, 22.

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[51]MacDonald, 28.

[52]MacDonald, 28, 29.

[53]Colombian Opiate Assessment, 15.

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[55]Colombian Opiate Assessment, 15.

[56]John Van Fleet.

[57]Colombian Opiate Assessment, 15.

[58]Colombian Opiate Assessment, 16.

[59]Colombian Opiate Assessment, 16.

[60]Colombian Opiate Assessment, 16.

[61]Colombian Opiate Assessment, 6.

CHAPTER FOUR

POLICY

International Agreements, Intergovernmental and Interagency Accomplishments and Cooperation

This chapter discusses initiatives taken by the United Nations, United States Government, the Government of Colombia, and the world community to counter the illegal drug threat. It discusses specific interdiction actions and counterdrug technologies in use and in development which will help answer the primary research question.

U.S. Drug Policy

"Narcotic foreign policy" gained importance and was politicized during President Reagan's administration when, in April 1986, he issued a national security decision directive that drug trafficking constituted a "grave threat to the security of the hemisphere."[1] At that time the U.S. began providing advice, training, and equipment to Latin American countries and conducting counterdrug operations on the high seas.[2]

In September 1989, President Bush delivered his "War on Drugs" speech. This speech released his National Drug Control Strategy and stated that "all of us agree that the gravest domestic threat facing our nation today is drugs," and that our weapons are "the criminal justice system; our foreign policy; our treatment systems; and our schools and drug prevention systems." What has been missing is "a strategy to effectively use them."[3]

Bush's "War on Drugs" followed Reagan's lead and expanded his program into a three-pronged anticocaine campaign aimed at pressing Andean source countries to eradicate coca leaf production, cut off the flow of drugs northward through the Caribbean and Mexico and increase

law enforcement penalties for domestic users and dealers.[4] Bush's strategy added a military ingredient to the anti-drug effort by sending increased numbers of military members to Panama (who also served roles peripherally associated with drug interdiction), and by deploying additional naval vessels to the Pacific (initially consisting of ships off the coast of Colombia and Central America) and to the Caribbean, and by increasing Green Berets in Peru in a training capacity.[5]

The Secretary of Defense, Richard B. Cheney, delivered his Department of Defense Guidance for implementation of the president's National Drug Control Strategy by letter dated September 18, 1989 to the DOD, all Commanders in Chief and all major DOD players who were to become part of the "drug war." This guidance delineated DOD responsibilities "to serve as the lead federal agency for the detection and monitoring of aerial and maritime transit of illegal drugs." Other tasks assigned to the DOD were: assist in nation building, provide "operational support to host country forces . . . execute security assistance programs in coordination with the Department of State, [and] . . . plan for U.S. forces to complement the counternarcotics actions of U.S. law enforcement agencies and cooperating foreign governments."[6]

"Though there is little evidence that this war can ever be won, the attempt has inspired a major reorientation in American popular attitudes towards drug use."[7] During Reagan's administration, both drug arrests and the U.S. prison population doubled.[8] The 1988 Anti-Drug Abuse Act (public law 100-690) reflected the increased attention level given the drug situation by compelling the Department of Justice research arm, the National Institute of Justice, to place drug-control projects at the top of its priorities list for funding.[9]

The Bush Administration realized that any viable approach to the drug problem must recognize and use the synergism between supply reduction (including overseas crop reduction, interdiction and domestic law enforcement) and demand reduction (including extensive public

awareness and education, intervention schemes and clinical treatment and rehabilitation efforts)."[11] "The Bush strategy was premised on three concepts: linkage, conditionality, and increased resources."[12] First, the anti-drug campaign needed to be linked to building strong democracies and healthy economies. This linkage was deemed necessary to control insurgent areas so that the producer nations, especially Colombia and Peru, could implement counternarcotics programs.[13]

The second concept of the Bush strategy involved the national drug control budget which has steadily increased financial resources from $2.8 billion in 1985 to $13.2 billion in 1995.[13]

The February 1994 National Drug Control Strategy publication states:

> The National Security Council last year directed a comprehensive interagency assessment of the international narcotics challenge and the Administration's response to it. This assessment was further framed by the need to examine the foreign counternarcotics goals and objectives . . . . The 7-month review reaffirmed the complexities involved in attacking the international narcotics problem and concluded that the past reliance on an interdiction-based strategy was too narrow and costly to address the full range of threats posed by drug trafficking.[14]

The Clinton Administration concluded that the lion's share of U.S. drug control funding should be focused on the demand side of the equation. It has focused its efforts on the U.S. drug consumption through education, community programs and the treatment of hardcore drug users.

Of the $10.6 billion 1991 U.S. drug budget, 70 percent was for supply reduction and 30 percent for demand reduction. The $13.2 Billion 1995 drug budget targeted 59 percent at demand reduction and 41 percent for supply reduction. "This represents a dramatic shift in program emphasis in favor of treatment and prevention programs."[15] The budget has shifted resources to consumption. In 1995, the drug education and community programs budget increased by 28 percent and the drug treatment budget increased by 14 percent over the 1994 budget.[16]

The third concept of the Bush strategy was conditionality. Funds were conditioned on successful accomplishment of bilaterally negotiated targets. "The carrot" is given conditioned on positive results. The Foreign Assistance Act of 1961 is the mechanism used to facilitate the "Drug War" objectives. The Foreign Assistance Act of 1961, as amended, requires the president to submit to Congress a determination of counterdrug cooperation of major drug producing and transiting countries. The president sends a current list of the drug producing and transiting countries which is based on the previous year's International Narcotics Control Strategy Report (INCSR) and other sources.[17] He then sends the determination of certification to Congress that each country took adequate steps that year to meet the goals and objectives of the 1988 UN Convention.[18] "Nations must have fully cooperated with the United States or taken adequate steps to achieve compliance."[19]

Decertification--the U.S. does not certify that full compliance has been met or that adequate steps have been taken--triggers a reduction in U.S. aid and opposition to loans in various Multilateral Development Bank activities. Decertification may be waived if the president determines that it is in the United States' national interest to continue the aid and vote for bank loans on behalf of that nation.[20] If vital U.S. national interests would be at risk in denying certification, that country would receive a "vital national interest" certification.[21]

Colombia received regular certification in 1994 but a vital national interest certification in 1995 along with Bolivia, Lebanon, Peru, and Pakistan. To put this into further perspective, Afghanistan, Burma, Nigeria, and Syria were denied certification in 1995.[22] Peru and Bolivia made progress in law enforcement initiatives but did not make progress toward reduction of the cultivation of coca. Colombia, on the

other hand, has serious problems with the authority given its law enforcement institutions. The narcotraffickers

> threaten Colombia's very social and political institutions. Colombia needs an aggressive policy to capture and prosecute major drug traffickers. They need a judicial system and process that really punishes drug-traffickers with sentences commensurate with their crimes rather than just slaps on the wrist. They need money laundering and asset forfeiture laws and laws which actually function properly to attack the wealth of the traffickers.[23]

The certification of Colombia is based upon several important factors: it is an important democracy; it has important economic ties with the United States; and most important, it is the most critical country to the President's Western Hemisphere drug strategy.[24]

During the press conference from which much of the above information is taken, a question was asked of Ambassador Bob Gelbard, Assistant Secretary of State for International Narcotics and Law Enforcement (1995), that a cynic might see this list and figure that vital national interst certifications are granted to countries "with which we have good relations for other reasons and that the nations we don't certify are ones we don't like for other reasons."[25] Secretary Gelbard challenged that assessment, but went on to say that it might turn out that some of the countries that received that certification category are ones in which we have a range of U.S. interests. He also said, "It was really done on the basis of performance and expectation of better performance."[26] The exchange reveals that none of the countries denied certification--Burma, Iran, and Syria, for instance--happen to be located in the Western Hemisphere, and the U.S. has few ties to them.[27]

The U.S. Andean drug control strategy, devised in 1990, laid out four objectives and tied together economic assistance and military assistance in one package. This strategy deviated from previous programs in that it was aimed at disrupting the traffickers rather than disrupting the farmers. The first objective was to strengthen the political will and institutional capability of the three Andean governments (Colombia, Peru, Bolivia). The second was to increase the

effectiveness of the nations' military and law enforcement organizations to conduct operations against all points in the cocaine economy (assets, laboratories, fields, money laundering, precursor chemicals, and the product). The third objective was to investigate and immobilize the major cartels. And fourth was to incorporate expanded economic assistance to counter the negative effects of the producing nation's drug infrastructure breakdown resulting from effective counternarcotics programs.[28]

U.S. farm lobbies, working through USDA, have blocked initiatives of the U.S. Agency for International Development (USAID) to initiate crop substitution programs of citrus and soy crops in the drug producing nations out of fear of increased competition with U.S. markets.[29] On the other hand, U.S. subsidies can be seen as unfair price supports promoting a business that would then flood the U.S. market with lower-priced commodities thereby causing financial difficulties for U.S. farmers.

The U.S. drug policy toward Colombia focuses on institutional development of the legal system and narcotics enforcement. U.S. policy attempts to reduce flow of illicit drugs to the U.S. by identification, investigation, prosecution, and punishment of criminals including the disgorgement of ill-gotten gains. The strategy is aimed at reducing illicit drug producers' capability to cultivate coca and opium poppies through aerial eradication and encouraging and assisting the Government of Colombia in implementing effective legislative reforms. Desired legislation includes initiatives such as extradition, asset sharing, confiscation of ill-gotten gains, and the imposition of prison sentences that are commensurate with the crimes committed and which do not include meritless sentence reductions as a matter of course.[30]

The U.S. Government assists and coordinates activities with international organizations like the Mini-Dublin group. The Mini-Dublin group assists the Government of Colombia with alternative development

programs, in the reduction of the consumption of illegal narcotics in Colombia, and in training law enforcement personnel so as to improve efficiencies. The U.S. Agency for International Development (USAID); Department of Justice International Criminal Investigative Training Assistance Program (ICITAP); Department of State, INL, Narcotics Affairs Section (NAS); DOD; DEA; and various offices of the Department of Justice, Office of Professional Development and Training (OPDAT) each have a share in the training and assistance of Colombian institutions to reduce the influence of illicit drugs.[31]

USAID administered training and technical assistance toward judicial reform, but also provided funds to the Government of Colombia to help finance projects encouraging communities to voluntarily eradicate opium poppies.[32]

U.S. Counterdrug Accomplishments

The Department of Defense (DOD) has contributed heavily to the nations' counterdrug effort through its strategic, operational and tactical level efforts.[33] DOD has funded the lion's share of new technology research and development (R&D) and has coordinated with the Office of National Drug Control Policy, Counterdrug Technology Assessment Center (CTAC) and 21 other national counterdrug agencies such as DEA, FBI, Customs Service, Department of Agriculture, and CIA since early 1992.[34] Utilizing its surveillance and intelligence gathering resources and its training experience DOD has supported U.S. and host nations law enforcement agencies which in recent years (and particularly in 1995) assisted in the arrests of nearly all of the Cali drug cartel kingpins by Colombian counterdrug forces.[35]

DOD's support in the Colombia-Peru region yielded the seizure or destruction of over 20 drug aircraft by the producer nations in 1995. According to a Bogota television newscast, some of these aircraft were shot down.[36] This is considered an important factor in the number of suspected drug trafficking flights in that area having dropped to less

than half of the 1994 number. Limited reporting indicates that these aircraft interdictions have had an effect on the quantity of coca base being air transported to Colombia for processing thus negatively affecting prices paid to the farmers and base producers and increasing the price of cocaine on the street. Additionally, there are indications that some coca farmers may be abandoning the coca trade and "taking a closer look at USAID-sponsored alternative development programs."[37] This result is identical to that of OPERATION BLAST FURNACE in 1986 in which several cocaine laboratories were interdicted by the Bolivian Police's Mobile Units for Rural Areas (UMOPAR), DEA, and U.S. military forces. These forces affected the hubs of cocaine processing which reduced the demand for the raw materials. Prices temporarily dropped below the profit level for the raw materials, and some campesinos "sought assistance from USAID in developing alternative crops."[38]

In-transit or "transit zone" interdiction efforts also saw some success in 1994 and 1995. The DOD completed the replacement of some fixed surveillance systems with flexible and more agile systems in 1995. These new systems cost half of their predecessors but are just as effective. In July 1995, the Nataly I sailing from Buenaventura, Colombia, was tracked by a U.S. fast attack submarine and multiple other Navy aircraft and platforms and seized near the Galapagos Islands by the U.S. Coast Guard. That seizure kept 12 metric tons of cocaine off the streets of the United States.[39]

The U.S. Navy's Relocatable Over-the-Horizon Radar (ROTHR) "has proven itself repeatedly as a stand alone detection and monitoring system."[40] Currently two systems are operational. The first was installed in Virginia which covers the Caribbean. The second is in Texas. And the third system is authorized to be installed in Puerto Rico. These systems provided the "first detection" capability for nearly one-third of the trafficking cases. They provide "continuous tracking from the source countries to the drop zones and back in a great

majority of cases," and provide a "large number of handoffs" to the Coast Guard and Customs which have resulted in successful interdictions.[41] Technology enhancements of the ROTHR which are currently in development include enhancing operational range up to 2500 miles and developing an altitude readout feature.[42]

Some short term success with the radars and DOD intelligence, and detection and monitoring has forced the traffickers to switch to a more heavy riverine transportation useage, but U.S. Government agencies have "begun to develop a riverine strategy" to effectively inhibit that mode also.[43]

Other DOD programs include training pilots, mechanics, and logisticians, giving police tactical interdiction skills training, and providing human rights awareness training.[44]

The DOD believes that development of a "maritime strategy for transit zone interdiction is essential" due to the shift in trafficking drugs from non-commercial air to maritime cargo. Because Puerto Rico has become a major transshipment point, a plan must be developed to "improve the interdiction of drugs coming through or into Puerto Rico" to include action against local maritime smuggling, and to institute "the inspection of Puerto Rico to U.S. cargo."[45] Inspection of Puerto Rico to U.S. cargo has not been done in the past because Puerto Rico is U.S. territory and cargo is inspected by U.S. Customs when entering that island.

Numerous other meaningful new technology-based counterdrug programs sponsored by the various U.S. agencies are in all phases of research, development, and implementation. Among these important projects are several nonintrusive inspection systems for cargo containers utilizing properties such as acoustics, high energy x-ray technology, neutron inspection systems which use beams that penetrate the container to react with the cargo (pulsed fast neutron analysis, neutron elastic scatter technology), gamma ray detectors, nuclear

magnetic resonance technology, and a gas chromatography system. Numerous computer-based communications achievements and on-going development of technology such as a facial recognition system, voice printing, forensics, ballistic imaging systems, and computer networking to analyze cellular phone useage are in the pipeline. Several tracking and communications systems are also available. Some are enhanced by the Global Positioning System (GPS), and some are miniaturized. Some systems' emissions are reduced to low probability for intercept-low probability for detection (LPI-LPD). Also available are operational and prototype transponder systems that are powered by the interrogating radar.

There are numerous systems for fighting the demand side of the drug war which provide nonintrusive detection of individual drug use by using hair, sweat, and saliva; testing of artificial enzymes designed to interfere with the drug molecule's ability to provide drug related sensations in the drug abuser; and brain scanning systems to determine the part of the brain that is activated by the drug.[46] These systems are in varying stages between R&D and fielding.

The U.S. Government is concentrating on "destroying trafficking organizations and interdicting drug flows at every stage from source to destination."[47]

> The drug industry is powerful. But the collective political will of countries around the world to stop drug trafficking is more powerful. By effectively addressing all elements of the drug trade in each country, including demand for drugs in the United States, we can cripple the drug traffickers.[48]

International Agreements

The United Nations Conference for the Adoption of a Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances was held in Vienna, Austria, November 25 through December 20, 1988. It is now the standard by which the world measures action against drug trafficking and its related activities. Commonly known as the 1988 UN Convention, it was updated by UN resolution in 1990.

> The purpose of this Convention is to promote ooperation among the Parties so that they may address more effectively the various aspects of illicit traffic in narcotic drugs and psychotropic substances having an international dimension. In carrying out their obligations under the Convention, the Parties shall take necessary measures, including legislative and administrative measures, in conformity with the fundamental provisions of their respective domestic legislative systems.[49]

The Convention is designed as a model from which legislation can be drawn. The principles and obligations are based on the League of Nations 1936 Convention which was the first International attempt to take steps to suppress illicit drug trafficking. It was a multilateral agreement which provided penalties for the manufacture, distribution, and possession of illicit narcotic drugs covered by the convention.[50] But the 1988 Convention goes further to gain outright commitments from the Parties and gives procedures to encourage and increase the ease of compliance.[51] The 34 articles of the Convention address and set forth a model of legislation covering: definitions, scope of the Convention, offenses and sanctions, jurisdiction, confiscation, extradition, mutual legal assistance, transfer of proceedings, other forms of cooperation and training, international cooperation and assistance for transit states, controlled delivery, substances frequently used in the illicit manufacture of narcotic drugs or psychotropic substances (essential and precursor chemicals), materials and equipment (equipment necessary to process illicit drugs), measures to eradicate illicit cultivation, commercial carriers, commercial documents and labeling of exports, illicit traffic by sea (maritime interdiction), free trade zones and ports, the use of the mails, information to be furnished by the Parties, functions of the commission, functions and reports of the board, plus 14 additional administrative articles and an annex.[52]

By the end of 1995, 118 countries had ratified the terms of the agreement. Additionally, 20 countries had signed but not yet ratified the treaty.[53] The 1988 Convention illustrated that no country is immune to the drug threat and "provided an effective tool for fostering innovative international control measures."[54] Each year the United

Nations institutes resolutions furthering the language of counterdrug efforts.

Colombia ratified the 1988 Convention on June 10, 1994, but had exceptions to the agreement's clauses regarding extradition, asset forfeiture and maritime interdiction.[55] The extradition of Colombian citizens is unconstitutional in Colombia, preventing U.S. prosecution of the notorious cartel leadership.[56] Because the U.S. can not prosecute, and because of consistently light Colombian judicial efforts and sentencing, the deterrence and effectiveness of counterdrug efforts is weakened tremendously.

The United Nations General Assembly declared the 1990s "the Decade Against Drug Abuse" in February of 1990. The session emphasized the importance of members tightening legal cooperation in chemical controls, tracking and seizure of drug money, and transfers of illegal arms and explosives to drug smugglers.[57]

The UN Fund for Drug Abuse Control (UNFDAC) attempts to shame farmers away from cultivating illicit drug crops by telling them that it is a crime against humanity. Using crop substitution, alternative development, and financial incentives this group has had success. UNFDAC bases its program on two fundamental premises; first, it is the duty of the individual to abandon illegal cultivation; and second, it is the moral duty of the international community to provide assistance to the farmer to help him take steps toward that end.[58]

The importance of all countries participating in the reduction of illicit drugs and their trafficking is exhibited in the the threat to transit and producing countries of increased internal consumption of drugs, particularly due to payment of services in drugs instead of cash. Where only a few years ago cocaine was produced only in Colombia (which is still the largest producer) cocaine laboratories are now being found worldwide, particularly in Bolivia, Peru, Lebanon, Nigeria, and the

United States. More and more of the world community has an increasing stake in ending the drug epidemic.[59]

Intergovernmental Cooperation

According to the 1995 INCSR the Government of Colombia is achieving limited success in the areas of narcotics interdiction, illicit crop eradication, and essential chemicals seizures. Weak legislation, corruption and inefficiency continue to hamper their efforts to bring high level traffickers to justice. The Colombian National Police have dismissed over 14,000 officers for corruption over the past four years, 100 of these were implicated in scandals at the Bogota International Airport.

The Colombian political structure fails to support counternarcotics efforts at an operational level adequately enough to severely inhibit drug production. The following (taken from the aforementioned news conference) illustrates the U.S. feeling regarding corruption and collusion of the Colombian Government with the criminals. Secretary Gelbard was asked how he felt about the National Police director apologizing to the Cali cartel for disrupting a birthday party for one of their chieftains. Secretary Gelbard reponded that the current head of the Colombian National Police "is someone in whom we do have confidence."[60] To questions regarding President Samper, however, who according to Gelbard actually made the above apology, he said ". . . we clearly do not feel at this point that the Colombian government is fully cooperating with us" and "we have been fundamentally concerned about, as I mentioned earlier, the pervasive corruption throughout political institutions at all levels."[61]

The Administration's hope is that the Colombian government will follow through on stated objectives and achieve positive results in the fight against drug trafficking and to help the Colombian people "solidify their democratic institutions." President Samper signed The Anticorruption Law in June 1995 which makes illegal some forms of public

corruption and the laundering of assets from kidnapping, extortion, financial operations, and smuggling.[62] Time will tell if the Colombian Constitutional Court will uphold or reject the legitimacy of that document. Mr. Samper had also previously initiated development of a "hemispheric money laundering convention" and hosted a meeting of money laundering experts in November of 1994.[63] Further goodwill was promised by Mr. Samper to President Clinton in July 1995 with the words, "Colombian justice will punish drug trafficking kingpins who have been captured or have surrendered by meting out maximum allowable sentences to be served in secure and spartan prisons." In another statement he said "the government is determined to ensure they serve their sentences in prisons that feature conditions of austerity and tight security."[64] However, on January 11, 1996 Jose Santacruz Londono, the top Cali Cartel leader of operations, simply got into a car and escaped a Colombian prison.[65]

Mr. Gelbard stated that the Administration has not threatened the Colombian government with denial of any certification next year, but emphasized that serious discussions had been held with ministerial leaders on U.S. expectations in "great precision" and that there can be no doubt in the minds of the Colombian government about those expectations or "the degree of cooperation that we're prepared to continue to offer."[66]

Colombia was in fact decertified for U.S. aid on March 1, 1996. Jose Santacruz Londono was subsequently found and killed by Colombian authorities only a few days after the decertification of Colombia for U.S. aid. The killing raises some questions about the connection, if any, with the decertification. Did someone "give up" Londono as a favor to the Colombian Government? Did the government already know where the fugitive was staying? Was this action staged to prove a point to the U.S. government? Was the capture/killing merely a coincidence?

Colombia has signed bilateral agreements with the U.S. on asset sharing and chemical control and a mutual legal assistance treaty (MLAT), but the Colombian Constitutional Court found them "irregular" and the two governments have agreed to revert to and adhere with the 1988 UN Convention, with which the Government of Colombia does not fully agree.[67] A discouraging ruling from the Colombian Constitutional Court was handed down May 5, 1994. This ruling declared as unconstitutional two provisions of the Colombian antinarcotics statute which penalized Colombian domestic drug use and possesion.[68]

During the 1990 Cartagena Accord Conference, in which President Bush claimed, "We've in fact just formed the first anti-drug cartel," Colombian President Barco said, "each link in the cocaine trade must be attacked simultaneously--production, distribution, consumption." Also during the conference, Mr. Barco emphasized the importance of reducing demand and said, "every tactic, every weapon pales into insignificance compared to the need to reduce demand."[69] The Cartegena summit conference on drugs served to bring four of the leaders of the leading Western Hemisphere drug producing and consuming nations (United States, Bolivia, Colombia, Peru) to the same table. They discussed and agreed on strategy--that all of the areas which need to be brought under control are "interconnected and self reinforcing," that "supply reduction efforts must be accompanied by significant reduction in demand," and that they would "negotiate bilateral and multilateral agreements."[70] This was a grand exhibition of continuity and cooperation, but as we have seen, the agreements made have largely not been instituted between the U.S. and Colombia because of blocking by Colombia's congress and constitutional court and the judicial system's failure to enforce.

> There was a demonstrable absense of support by some quarters of the political establishment to buttress the gains achieved by GOC institutions operating at the ground level. There were no efforts made in the areas of judicial reform, capture and incarceration of syndicate heads, or the strengthening of executive institutions to counter the successful efforts of the trafficking sydicates. Lack

of action by the congress on GOC-introduced legislation also remains a problem.

The Colombian Congress and Constitutional Court have made great efforts and great strides to slow or reverse the counterdrug efforts of other elements of the Government of Colombia, the U.S. Government, and the world community operating through the United Nations, UN Drug Control Program (UNDCP), and the Organization of American States, Inter-American Drug Abuse Control Commission (OAS/CICAD). Some of the initiatives challenged by the Constitutional Court are extradition, confiscation, maritime interdiction, asset sharing, evidence sharing, and a U.S.-Colombia mutual legal assistance treaty (MLAT). These efforts by factions of the Colombian government apparently bending to demands of drug cartels to limit and reverse progress are having a devastating effect on the efficiency of the supply side of the drug control war and critically endanger cooperation of the United States administration and the support of the U.S. Congress for technical and financial assistance to Colombia.

Other provisions of the bilateral agreement which are enforceable in Colombia are eradication of crops, interdiction of illegally diverted precursor and essential chemicals, and building of the drug enforcement infrastructure.[72] "All branches of the Colombian Ministry of Defense (MOD), including the Colombian National Police (CNP), Army, Navy, Marine Infantry, and Air Force, participated in and contributed to, interdiction efforts."[73]

Continued cooperation with the Government of Colombia is very important to the United States. It allows the U.S. to work closely with Colombia on other important issues such as human rights, free trade, and the international business arena. Without certification, Colombia will have a difficult time drawing on other international donors to assist with alternative development programs and for financing for much needed drug enforcement projects such as a new radar system designed to increase drug trafficking detection.[74]

Summary

The adoption of the 1988 United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psycotropic Substances marked the beginning of modern worldwide policy on drug control. That Convention took positive, defined steps toward implementing anti-drug legislation and governmental cooperation across the globe. At the beginning of 1996, 138 countries had signed the document. Of that number, 118 had ratified it into law within the scope of their respective country's legislative systems. The Convention encourages governmental cooperation in law enforcement in cultivation, processing and transit operations. It sets the framework for amending laws to counter illegal transfer of chemicals and money laundering operations; for allowing extradition of indicted persons on drug charges, for the exchange of evidence, asset sharing and mutual legal assistance; for supporting training; and for administrative actions to smooth the accomplishment of these objectives. Each year the United Nations takes further steps to strengthen counterdrug efforts by tightening the language in its resolutions. In early 1990, the UN declared "the 1990s the decade against drug abuse."

President Reagan initiated the modern U.S. drug war in 1986 upon issuing a national security decision directive declaring drug trafficking a grave threat to the security of the hemisphere and establishing a $2.9 billion federal drug control funding level. Then in 1989, President Bush declared his war on drugs by establishing the National Drug Control Strategy and launching his three-pronged approach to fighting drug trafficking from the Andes nations. His approach added strength to the foreign assistance certification process by making it conditional upon reform. He also increased financial resources budgeted to drug control and linked the campaign to building strong democracies and healthy economies.

Where the Bush Administration oriented the majority of funding to supply side reduction, the Clinton Administration switched the

emphasis to demand reduction and treatment of hardcore users resulting in a 60/40 split in federal drug control funding favoring demand reduction. Over the last ten years the drug war budget has increased nearly 500 percent to the 1995 level of $13.2 billion.

The drug control budget has funded numerous research projects which are in all stages of completion from research and development to operational in the field. Some of these projects include high technology nonintrusive cargo container inspection systems, noninvasive test kits testing subjects for drug use, computer based networking systems meeting the needs for a multitude of law enforcement tasks, miniturization of electronic components, GPS based or enhanced tracking and mapping systems, and LPI-LPD technology.

The certification of nations for U.S. foreign assistance has become an important facet of U.S. drug strategy in guiding worldwide anti-drug efforts. Compliance or steps toward compliance with the 1988 UN Convention of those countries identified each year as drug-producing and drug-transit nations is judged by the President, and then those countries are listed in one of three categories: 1)complied and certified; 2)not complied, but the U.S. has a vital national security interest in providing assistance; 3)or not complied and not certified.

Colombia received regular certification in 1994, a vital national security certification in 1995, and then was not certified in 1996.

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CHAPTER FIVE

ANALYSIS AND CONCLUSIONS

An increasing amount of heroin is entering the United States from Colombian producers and traffickers. This increase in the supply of heroin is accompanied by an increase in demand from illicit drug users in the U.S., primarily concentrated in the Northeastern cities such as New York, Philadelphia, and Boston.

There is no easy solution or magic cure to reduce the trafficking or consumption of the drug. Both supply and demand reduction efforts must be improved. On the supply side - crop substitution, alternative development programs, improved legitimate rural law enforcement, chemical controls, money tracking and laundering law enforcement, asset forfeiture, inter-governmental cooperation, extradition treaties, criminal prison sentences, customs inspections, and detection and monitoring need to be improved, legislated, or fully supported. On the demand side, anti-drug education, community programs, and hard core drug user treatment programs need to be supported.

Current techniques and available technology are appropriate to crack the problem. But major areas of weakness exist in the areas of inter-governmental cooperation, extradition, money tracking and laundering, and criminal sentences. Critical is an all-encompassing international effort to attack drug trafficking at every facet and from every angle.

Three questions were asked in this thesis problem. The secondary questions addressed were whether the production and smuggling methods would remain the same for heroin as they are for cocaine, and whether the two large cocaine cartels, Medellin and Cali, would allow

smaller heroin cartels to operate independently, force them or allow them to cooperate, or close them down. The primary question was, will the U.S. need to reevaluate its interdiction techniques, methods and technologies in order to combat this increasing heroin threat.

The question regarding production and smuggling methods involves looking at the functions of cultivation, processing, trafficking and distribution.

There is not a staggering number of hectares of opium poppy in cultivation in Colombia--an estimated two percent of the world crop. The alkalinity of the gum is the critical factor in producing high purity heroin and the physical conditions of Colombia are not ideal for producing a large yield of high alkaline opium gum. Therefore the yield of high-purity heroin from Colombian opium gum is lower than that produced from traditional source countries. Despite these conditions the heroin that the Colombians do produce and traffic is very high in purity.

All other factors of the production and trafficking equation favor Colombia as a likely source of large quantities of the drug. The mechanics of cultivation such as the workforce of campesinos, the guerrillas that guard and control the fields, and clandestine methods of transport for raw materials, precursors, and the final product are all solidly in place. The relationship for cocaine production between the large cartels and the campesinos also could enable a smooth transition to or an increase in production of heroin. Heroin's ability to multiply profits for the cartels will congeal as expertise in cultivation and production improve, and as demand and market share on U.S. streets increases.

In the processing stage, many of the key chemicals used in the production of cocaine, such as toluene, ether, hydrochloric acid, and acetone, are also key chemicals or substitute chemicals in the processing of heroin. Other chemicals are required in the processing of

both drugs, but this commonality would make the switch to heroin or the incorporation of heroin into the product line a natural step.

Trafficking methods and routes until now have been similar for heroin and cocaine transported to the U.S. from Colombia. But couriers, known as "mules," and small land shipments have been the primary methods of transport of heroin into the U.S. This practice differs from the primary method of large air shipments and maritime cargo container shipments of cocaine. In some cases, the two drugs have been shipped together in the same containers. The fact that only small heroin shipments have been found indicates that to date the Colombians have not been able to produce large quantities of the drug consistently. However, the shipments have been made by like methods, modes, and routes. The possibility exists for the drug traffickers of Colombia to play a larger role in waypoint transshipment. By shipping heroin from other source countries to the U.S. through Colombia, or by shipping the drug from other source countries to Colombians in the United States, they supplement their own heroin production and increase profits.

Distribution methods to the street remain the same for heroin as for cocaine, and in fact, many drug dealers handle both drugs. While cocaine and heroin are shipped to the United States using a multitude of modes and entry points, cocaine comes primarily from Colombia and heroin is shipped from several sources worldwide.

So, to the question of trafficking methods remaining the same, across the board, the answer is yes. They remain the same and it is extremely easy for Colombian traffickers to change to or add heroin to their product line.

To the question of whether the cartels will allow smaller heroin cartels to operate in the heroin market, the answer is not so clear.

The Medellin and Cali cartels have both shown limited interest in the marketing of heroin, but the Cali group has been the more heavily

involved of the two. With the majority of the kingpins of these cocaine cartels captured or killed, questions arise to the level of cocaine and heroin production these cartels will continue to produce and traffic, how much control will they try to exercise over the other cartels, and what degree of heroin production will these cartels continue. it is necessary to analyze the market, the profits at stake, and the desires of the cartels.

As long as there is no conflict of interests between the smaller heroin cartels and the large cocaine cartels such as market interference (loss of profits due to the loss of market share to the other players), there will probably be no violence between the groups. The contrary will be true if the small heroin cartels attempt to compete with the large cocaine cartels. This will probably not happen until South American heroin takes a larger part of the U.S. market and production efficiencies increase, giving heroin a clear profit and production advantage over cocaine, the cartels have a larger stake in heroin production, and heroin mass production can be sustained.

Research on the question of whether the U.S. Government needs to reevaluate its interdiction efforts and develop new interdiction methods and technologies leads to discussion of available and developing new counterdrug technologies and to inter-governmental cooperation.

Counterdrug technologies have made great strides, and as the U.S. Government is fiscally able to purchase the systems, they should provide a marked improvement in the ability of government agencies and departments to thwart the drug scourge and to see successes in drug supply reduction.

Some areas of law enforcement controls need great improvement worldwide, but particularly in the Government of Colombia. Counter-money laundering asset confiscation regulations must be installed worldwide in accordance with the spirit and letter of the 1988 UN Convention to prevent criminals from massing wealth from their illegal

activity. But, constitutional questions in several countries are holding back progress toward the goals. Precursor chemical controls must be uniformly installed and enforced worldwide to prevent the processing of illegal drugs and to protect the environment from continual dumping of these chemicals onto the ground and into streams.

The two most disruptive regulation failures that exist in Colombia in relation to the drug threat to the United States are extradition and adequate prison sentences. Because the Colombian constitution prohibits extradition of its citizens, the cartel leaders can hide in Colombia and be safe from external prosecution. These areas are ones in which the Colombian Congress, Constitutional Court, and judicial system have not delivered improvements sufficient to make real progress in the drug war. They are the most significant weak links in the chain between counterdrug law enforcement efforts and the reduction of illegal drugs arriving on the streets of the United States. The United States Government needs to reinforce its resolve to encourage the Government of Colombia to strengthen its anti-drug laws.

The offering of effective, tightly controlled alternative development and crop substitution programs is important in giving the campesinos a choice to change their method of livelihood, and to limit the amount of raw materials such as opium gum, coca leaves, and marijuana from moving into the processing stage of the drug pipeline. As was learned from the Vietnam War and other guerrilla conflicts, the will of the people must be won before the war can be won. In this case, the campesinos must also be won over to reduce or eliminate drug crop cultivation while other synergistic actions of law enforcement such as a bona fide rural law enforcement presence, eradication, chemical controls, and processing and shipment drug busts are made. These actions must take place concurrently before significant reduction in the amount of drugs shipped to the U.S. will occur.

A continued strengthening of the U.S. drug control program--waging a balanced methodical fight to improve counterdrug laws in all of the drug producing and transit countries through the United Nations forum and U.S. diplomatic ties, and interdicting the drug traffickers and their products "on every front," as William Bennett stated, from cultivation through money laundering will severely restrict the flow of illicit drugs worldwide and greatly reduce the drugs' arrival on the streets and school grounds of the United States.

So, does the U.S. need to reevaluate its drug interdiction efforts, methods and technologies? No, the U.S. needs to tie up the holes that have previously been identified, and smother the illicit drug trade by removing all freedom of movement from the criminals and squeezing the breath from the industry.

GLOSSARY OF TERMS

There are a number of terms related to the opium and heroin trade that have multiple meanings or uncommon definitions and may need specific clarification for use during this research. These terms will be used as defined herein.

Acetic Acid, Glacial. Is also known as ethanoic acid or vinegar acid. Used in legitimate commercial organic synthesis. Can be used in place of ammonium chloride or ammonia solutions as a reagent to adjust alkalinity in the precipitation of morphine from an opium solution.

Acetic Anhydride. Is also known as acitic oxide or acetyl oxide. Used in legitimate industry for textile, leather tanning, pharmaceutical (particularly aspirin), and photography processing. Also the most commonly used acetylating agent of morphine and a key precursor chemical and reagent in heroin synthesis.

Acetone. Is also known as 2-propanone or dimethyl ketone; pyroacetic ether. Used in legitimate industry for manufacture of rayon, photographic films, paint, and varnish removers. Can be used as a solvent in processing opium and in the purification of morphine base.

Acetyl Chloride. Is also known as ethanol chloride. May be used in place of acetic anhydride as an acetylating agent in the processing of morphine but is more harzordous to use.

Acetylation. Is the key chemical process in converting morphine base to heroin. Can be accomplished using either acetyl chloride or acetic anhydride. Acetic anhydride is more corrosive and requires careful handling, but it is less hazardous to the user than acetyl chloride, thus is the first choice chemical used in the processing of heroin.

Adulterant. Is a pharmocologically active substance such as quinine, procaine, strychnine, or caffine added to heroin after the heroin conversion process is completed.

Alcohol (Ethyl Alcohol). Is also known as ethanol, grain alcohol, fermentation alcohol, drinking alcohol, anhydrous alcohol, ethyl hydroxide, or methyl carbinol. Used in legitimate industry in alcoholic beverages. Is used as a solvent during the purification of heroin base and in the conversion of heroin base to heroin hydrochloride (heroin HCL).

Alkaloid. Is a physiologically active, nitrogen contaning organic base derived from plants. Common ones are papaverine, caffeine, cocaine, codeine, morphine, nicotine, quinine, strychnine, atropine, mescaline, and narcotine.

Ammonium Chloride. Is also known as ammonium muriate, salammoniac, and salmiac. Used in legitimate industry in the manufacture of dry

cell batteries, dyes, fertilizers, washing powders, and medical use as an expectorant. Used as a reagent to adjust the alkalinity in the precipitation of morphine from an opium solution.

Benzene. Is also known as benzol. Used in legitimate industry for anti-knock gasoline. Used to initially extract morphine from opium. But its high flammabibility and acute toxic properties make it an poor choice for this process.

Calcium Hydroxide. See "lime, slaked."

Charcoal, Activated. Is also known as activated carbon or animal black. Used in legitimate industry (laboratories) for clarifying, deodorizing, and filtering various chemicals, and in medice as an antidote in the treatment of diarrhea. Used as a reagent in the purification of heroin.

Chloroform. Is also known as trichloromethane. Used in legitimate industry as a solvent for fats, oils, rubber, alkaloids, waxes, resins and to make the refridgerant Florocarbon-22. Used as a solvent in the synthesis of heroin.

Diluent. Is a substance added to the finished product to increase bulk, extend or cut the heroin. Typical diluents are mannitol, sucrose, lactose, and starch.

Ether (Ethyl Ether). Is also known as diethyl ether, ethyl oxide, diethyl oxide, sulferic ether, or ether. Used in legitimate industry for solvent in fats, waxes, dyes, perfumes, oils, resins, and medically as an anesthetic. Used as a solvent in the conversion from heroin base to heroin HCL.

Black Tar Heroin. Is a high purity heroin made from poppies grown in Mexico using techniques classified as Mexican in origin. It may be brown to black in color and sticky like roofing tar or hard like coal. Typically, black tar heroin is a hydrochloride salt and is taken by injection.

Drug-defined crimes. Are violations of laws prohibiting or regulating the possession, use, or distribution of legal drugs.

Drug-related crimes. Are not violations of drug laws but are crimes in which drugs contribute to the offense. Illegal drug use is related to offenses against people in three major ways:

- drugs can induce violent behavior;
- the cost induces some users to commit crimes to support their drug habits; and
- violence often characterizes relations among participants in the drug distribution system.[1]

Hectare. Equals 2.471 acres (10,000 square meters).

Heroin Base. Is also known as diacetylmorphine, crude heroin, or heroin no. 2.

Heroin Hydrochloride (Heroin HCL). Is also known as heroin no. 4 or China white. It is a salt of heroin that is water soluble and suitable for injection, snorting, or smoked. This is the type most commonly available to users.

Heroin No. 3. Is also known as heroin no. 3, or smoking heroin.

Heroin Signature Classification. Is the result of Heroin Signature Program analysis. Classifications currently defined include Southeast Asian (SEA), Southwest Asian (SWA), and Mexican (MEX). Also known as Heroin Signature Profiles.

Hydrochloric Acid. Is also known as muratic acid. Used in legitimate industry in petroleum production, ore reduction, food processing, pickling, and metal cleaning. Used to convert morphine base to morphine HCL or to convert heroin base to heroin HCL.

Lime, Slaked. Is also known as calcium hydroxide, calcium hydrate, caustic lime, or hydrated lime. Used in legitimate industry to manufacture cement, pesticides, fertilizers, and for water treatment. Used as as reagent in the extraction of morphine from opium by forming calcium morphenate.

Mexican Heroin. Is a type of heroin made from opium poppies grown in Mexico using techniques developed by Mexican chemists. This type of heroin is typically the hydrochloride salt form. The purity is usually low and suitable for injection. Mexican heroin appears in several shades of brown and is powdery in its consistency. Black tar heroin is also Mexican in origin and typically much higher in purity.

Morphene. Is an organic compound (alkaliod) found in the opium poppy. Used legitimately as an anesthetic or seditive in human or veterinary medicine.

Morphene Base. Is an intermediate product between the morphine alkaloid and morphine HCL. Morphine base is not easily soluable in water or easily absorbed into the human body therefore must be converted to morphine HCL or heroin HCL.

Precursor. Is a chemical that is the raw material for a new product. For example, morphine is a precursor in the production of heroin.

Reagent (Chemical Reagent). Is a chemcal which reacts with a precursor to form a new product. Acetic anhydride is a reagent used in the production of heroin.

Soda Ash. An alkaline mterial, also known as solvoy soda, washing soda, or soda. Used in legitimate industry for the manufacture of sodium bicarbinate, sodium nitrate, glass, ceramics, water softening, detergents, and soaps. Used in the production of heroin base.

Solvent. Does not react chemically with a precursor or reagent and does not become part of the final product. They are used to dissolve solid precursors or reagents and to separate and purify other chemicals.

Trafficking. Includes manufacturing, distributing, dispensing, importing, and exporting a controlled substance.[2]

Southeast Asian (SEA) Heroin. Is made in Southeast Asia; color ranges from tan to off-White. SEA #3 is considered smoking heroin but may also be injected. Caffeine and strychnine are usually added to the product before the manufacturing process is complete. SEA #4 is also injectable and produced in the "Golden Triangle" (Burma, Laos, and Thailand). It is usually a fine, white powder and considered the highest quality illicit heroin available.

Southwest Asian (SWA) Heroin. Is made from opium grown in Afghanistan, Iran or Pakistan. It may be refined in the European-Mediterranean area or the local Afghanistan, Iran, Pakistan or Turkey area. The opium processed in the Europe-Mediterranean area is a more highly refined (white heroin) product than that produced in the local area. SWA heroin is classified as SWA A, SWA B, and SWA C. All are produced as heroin base (smoking heroin) and heroin HCL (injectable).

Endnotes

[1]Drugs, Crime, and the Justice System, 2, 126.

[2]Drugs, Crime and the Justice System, 126, 145.

[3]DEA handout, Sep 93; DEA definition sheet, undated; Opium Poppy Cultivation and Heroin Processing in Southeast Asia, Drug Enforcement Administration, U.S. Department of Justice, September 1993, 23-30. All definitions except those derived from Drugs, Crime, and the Justice System were from DEA sources.

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